

1367.5 - Western Australian Statistical Indicators, 2010

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Summary

Contents



Statistical Summary

Includes:

Social and Demographic Statistical Summary. Updated 20/01/2011.

Economic Statistical Summary. Updated 20/01/2011.



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Includes:

WA Population Growth. Updated 20/01/2011.

Regional Population Growth. Updated 19/08/2010.

Births. Updated 22/12/2010.

Deaths. Updated 02/12/2010.

Causes of Death. Updated 08/04/2010.



Social Trends

Includes:

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Employment and Earnings

Includes:

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Includes:

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Includes:

Short-term Visitor Arrivals on Holiday. Updated 02/12/2010.

Short-term Resident Departures on Holiday. Updated 02/12/2010.



Environment

Includes:

Agricultural Water Use. Updated 22/04/2010.

Household Waste Management. Updated 03/06/2010.

In this issue

CHANGES IN THIS ISSUE

Western Australian Statistical Indicators are now updated on a 'rolling' basis when new data become available. To assist timely research and decision making, the statistics presented are current as at the latest update.

This issue includes:

- new economic, population, social and environmental data;
- links in each chapter to other relevant ABS and/or non-ABS data;
- a data cube containing links to relevant ABS data for WA; and
- a data cube providing a list of links to other relevant data sources.

EXPLANATORY NOTES

Explanatory Notes of the form found in other ABS publications are generally not included with Western Australian Statistical Indicators. Readers are directed to the Explanatory Notes contained in related ABS publications.

REVISIONS

Data contained in this issue are subject to revision as more complete and accurate information becomes available.

INQUIRIES

For information about other ABS statistics and services, please refer to the last page of this release.

List of Historical Feature Articles



FEATURE ARTICLES

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Dec 2009	Adult literacy in Western Australia Housing Finance - Subsidies for First Home Buyers
Sep 2009	Spotlight on the Pilbara
Jun 2009	The ups and downs of Western Australia's labour market
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Mar 2008	Regional household and family characteristics in Western Australia Retail industry in Western Australia
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Jun 2007	Research and experimental development in Western Australia General Social Survey - Western Australian summary Changing water and energy use in Perth homes
Mar 2007	The resource industry in Western Australia: 2001-02 to 2005-06 The agriculture industry in Western Australia
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Dec 2003	The construction industry in Western Australia
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Jun 2003	Population measures: A case study Salinity and land management on Western Australia farms
Mar 2003	Demystifying chain volume measures
Dec 2002	Western Australia: A small area perspective
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Mar 2002	Interpreting time series data
Dec 2001	A view of housing density in Perth Educational participation in Western Australia
Sep 2001	A century of population change in Western Australia Foreign capital expenditure in Western Australia
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Mar 2001	Crime and safety in Western Australia
Dec 2000	Small business in Western Australia
Sep 2000	Western Australia's merchandise trade with the rest of the world

About this Release

Provides access to statistics for Western Australia relating to its economy, people, industry and environment.

This is the final release of Western Australian Statistical Indicators pending the development of a new national output, scheduled for release in July 2011. For further information, contact Trevor Draper on (08) 9360 5394 or email trevor.draper@abs.gov.au.

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SOCIAL AND DEMOGRAPHIC STATISTICAL SUMMARY

Population

- The preliminary estimated resident population of WA as at 30 June 2010 was 2.30 million, an increase of 49,100 persons, or 2.2%, over the previous year. Nationally, the population grew by 377,100 persons, or 1.7%, to 22.34 million.
- In the 12 months to June 2009, the Perth Statistical Division (SD) had the largest population increase in WA, growing by 52,200 people (3.2%) while the population in the remainder of the state increased by 15,900 people (2.8%). The South West SD had the fastest growth in the state, increasing by 4.0% (9,500 people).
- The median age in WA increased slightly to 36.2 years in the five years to June 2009. At the Statistical Division (SD) level, Midlands had the highest median age (41.5 years) in June 2009, while the Kimberley and Pilbara SDs had the lowest median ages (30.5 and 31.5 years respectively).
- Across WA, the sex ratio in June 2009 was 102.8 males for every 100 females. The highest ratios were for the Pilbara SD (129.2), South Eastern SD (114.8) and Kimberley SD (111.2).

The Perth SD had the lowest sex ratio (100.9).

Births

- In 2009, the number of births in WA was 3.1% lower than the number registered in 2008, decreasing from 31,800 to 30,900. This was a substantial annual decrease when compared with a national decrease of 0.3%.
- The fall in the total number of births in WA from 2008 to 2009 was driven by a 10% decrease in births to women aged 15-19 years and a 5.7% decrease in births to women aged 35 years and over.
- Women aged 30-34 years continued to record the highest fertility rate of all age groups, with births to these mothers comprising almost 31% of all WA births in 2009.
- In 2009, the life expectancy of a child born between 2007 and 2009 was estimated to be 79.5 years for boys and 84.1 years for girls.

Deaths

- In 2009, the standardised death rate for Western Australia continued to decline, falling to 5.6 from 6.9 in 1999.
- The infant mortality rate has also been declining over the past ten years. In particular, the indigenous infant mortality rate has more than halved over the period (from 15.8 in 1999 to 7.7 in 2009).
- Cancer (malignant neoplasms), ischaemic heart disease and stroke continue to be the main causes of death. Together, these accounted for more than half (53%) of all deaths in WA in 2008.

Marriages and Divorces

- In 2009, the median age at first marriage in WA was 29.9 years for males and 27.9 years for females.
- The divorce rate has decreased over the past decade, falling from 2.8 divorces per 1,000 of the estimated resident population in 1999 to 2.1 in 2009.

Education and Training

- The apparent retention rate from Year 7/8 to Year 12 for all students in WA increased between 2008 and 2009, rising to 69% for males and 81% for females.
- For Indigenous students, the apparent retention rate from Year 7/8 to Year 12 was 38% in 2009, almost half the rate for all students in WA (75%). However, the apparent retention rate for Indigenous students has almost doubled since 1999 (20%).
- In 2009, 62% aged 25-64 years in WA had obtained a non-school educational qualification, increasing from 59% in 2008. Of these, nearly 25% had obtained a Bachelor degree or higher.

Crime and Justice

- In 2009, the number of crime victims recorded by the Western Australia Police decreased for most offences including Homicide and related offences; Sexual assault; Robbery; Unlawful entry with intent; Motor vehicle theft; and Other theft.
- The single exception was Assault for which the number of victims increased by 4% in 2009.
- Among the more common offences, motor vehicle theft showed the largest proportional decrease, with 17% fewer victims in 2009 than 2008.

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Economic Statistical Summary

ECONOMIC STATISTICAL SUMMARY

Employment and Earnings

- In December 2010, the unemployment rate for WA remained stable in trend terms at 4.6%, significantly lower than the national rate (5.1%).
- Strong employment growth was recorded in the November quarter 2010 for Construction (up 9,400 persons, 7%); Administrative and support services (up 8,300 persons, 23%); and Agriculture, forestry and fishing (up 6,800 persons, 17%).
- In WA, there were 30,300 job vacancies in November 2010, 6.8% higher than in August 2010.
- In the 12 months to August 2010, average weekly ordinary time earnings for full-time adults in WA rose by more than 5% in trend terms.
- In 2007-08, WA recorded the second highest average total income (\$47,488) behind the Australian Capital Territory (\$52,330).

State Accounts

- In the September quarter 2010, state final demand in WA (chain volume measures) increased by 1.2% in trend terms and maintained the strongest annual growth of all states and territories.
- Final consumption expenditure by households, which makes up about 44% of total state final demand, recorded an annual increase of around 5% in both trend and seasonally adjusted terms.

Prices

- Perth's Consumer Price Index (CPI) increased 0.5% in the September quarter 2010, the lowest increase among the eight capital cities.
- In the September quarter 2010, Perth was one of only three capital cities to record an increase in its preliminary established house price index (0.4%).
- In the September quarter 2010, the increase in the price index of materials used in house building in Perth (0.1%) was below the weighted average increase of the six State capital cities (0.4%).
- In the September quarter 2010, the Wage Price Index for the Private and Public sectors in WA increased by 1.2% and 1.0% respectively.

Consumption

- In November 2010, WA was one of four states to record positive growth (0.3%) in monthly retail turnover (trend) while, nationally, retail turnover remained unchanged.
- In November 2010, sales of new motor vehicles in WA decreased marginally in trend terms but were 13% higher than in November 2009.

International Merchandise Trade

- In the September quarter 2010, Western Australia recorded a trade surplus of almost \$21 billion. While the value of imports to WA fell by 15%, the value of exports from WA decreased only marginally (-0.4%).
- Iron ore and concentrates continued to be Western Australia's leading export commodity in the September quarter 2010, increasing by 6.6% to \$13.6 billion.
- In the September quarter 2010, WA received its largest value (over \$930 million) of imports

from China, followed by the United States of America and Singapore.

Investment and Finance

- Total new capital expenditure in the September quarter 2010 was higher in both trend (13%) and seasonally adjusted (20%) terms than in the same quarter of the previous year.
- In original data terms, the value of lending commitments in the month of November rose across all types of finance except Commercial finance, which fell by 8%.
- In November 2010, the number of dwelling commitments for owner occupier increased in both trend (1.3%) and seasonally adjusted (2.2%) terms over the previous month.

Construction

- In November 2010, the trend estimate for dwelling units approved rose slightly in WA for the third consecutive month. WA was one of only two states to record a monthly increase (1.3%) while, nationally, the trend estimate fell 0.4%.
- The value of building work done in the June quarter 2010 rose to approximately \$3.1 billion, with non-residential building being the greatest contributor to the increase.
- The value of engineering construction work in WA was \$6.9 billion for the June quarter 2010, 17% higher than the value for the June quarter 2009.

Mining and Energy

- In the September quarter 2010, total expenditure on minerals exploration increased for the fifth consecutive quarter, climbing above \$360 million in trend terms.
- In original terms the quantity of diamonds produced in the September quarter 2010 was 6% higher than in the corresponding quarter of 2009, while the quantity of iron-ore produced increased by 2.5% and the production of bauxite remained fairly steady over the period.

Tourism

- Just over 54,000 tourists arrived in the September quarter 2010, an increase of 4.5% from the same quarter of the previous year. South East Asian countries accounted for 42% of all visitors, most notably Malaysia (17%) and Singapore (16%).
- In the September quarter 2010, around 198,000 residents left WA for overseas holidays, 19% more than in the same quarter of 2009. The popularity of Indonesia as a holiday destination continued, with about 84,800 resident departures to that country during the quarter.

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WA Population Growth

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WA POPULATION GROWTH

JUNE KEY FIGURES, Western Australia

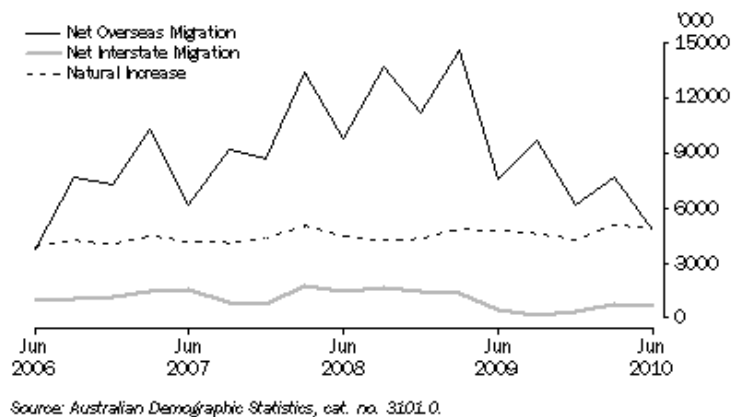
	Population at end Jun qtr 2010p (a)	Change over previous year	
Estimated Resident Population	'000	'000	%
Western Australia	2 296.4	49.1	2.2
Australia	22 342.4	377.1	1.7

(a) Estimated Resident Population at 30 June 2010. Estimate is preliminary.

Source: *Australian Demographic Statistics* (cat. no. 3101.0).

- The preliminary estimated resident population of WA at 30 June 2010 was 2.30 million, an increase of 49,100 persons, or 2.2%, over the previous year. Nationally, the population grew by 377,100 persons, or 1.7%, to 22.34 million.
- Although population growth across Australia declined from June 2009, WA continued to record the fastest population growth (2.2%) of all states and territories during the 12 months to 30 June 2010, ahead of Queensland (2.0%), Victoria and the ACT (1.8%), with Tasmania recording the slowest growth (0.9%).

Components of Population Growth



- For the year ending 30 June 2010, net overseas migration (NOM) contributed 58% of WA's estimated resident population growth. Natural increase (births minus deaths) and net interstate migration contributed 38% and 4% respectively.
- The preliminary NOM estimate for WA for the year ending 30 June 2010 was 28,200 people, 40% less than NOM levels reached in the previous 12 months (47,300). In 2010, WA recorded the lowest June quarter NOM estimate (4,800) for four years. This decline was probably influenced by recent decreases in the number of student and 457 temporary visas (workers sponsored by an Australian business) granted for entry into Australia, as well as reduced program levels for permanent skilled migrants.
- Natural increase in the year ending 30 June 2010 added an estimated 18,900 people to the WA population, 3.3% higher than natural increase during the previous 12 months.
- WA had an estimated net gain of 2,000 people from interstate migration for the year ending 30 June 2010 and was one of four states to record a net gain, along with Queensland (up 9,600), Victoria (up 2,600) and Tasmania (up 320). However, interstate migration to WA in the year to June 2010 was still considerably lower than in recent years, when the state's resources boom drove annual net interstate migration above 6,000.

This link takes you to data on Population Change and Components (Table 2) and Estimated Resident Population (Table 4) on the Downloads page of *Australian Demographic Statistics, Jun 2010* (cat. no 3101.0).

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Regional Population Growth

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REGIONAL POPULATION GROWTH, WESTERN AUSTRALIA

POPULATION GROWTH(a), Statistical Divisions - Western Australia

Statistical Division	2009p '000	Population Change 2008-2009p	
		no.	%
Perth	1 659.0	52 200	3.2
South West	246.2	9 500	4.0
Lower Great Southern	58.9	1 300	2.2
Upper Great Southern	191.7	230	1.2
South Eastern	58.7	498	0.9

Midlands	55.7	980	1.8
Central	64.8	1 300	2.0
Pilbara	47.5	1 400	3.1
Kimberley	35.0	730	2.1
Western Australia	2 245.1	68 100	3.1

(a) Based on Estimated Resident Population. Estimates for 2009 are preliminary.

Source: *Regional Population Growth, Australia, 2008-09* (cat. no. 3218.0).

- At June 2009, the estimated resident population of WA was nearly 2.25 million people, an increase of 68,100 since June 2008. WA recorded the fastest population growth rate (3.1%) of all states and territories in Australia for the third consecutive year.
- In line with the general trend across Australia, most population growth in WA in 2008-09 occurred in the capital city and along coastal areas of the state. The Perth Statistical Division (SD) had the largest population increase, growing by 52,200 people (3.2%) while the population in the remainder of the state increased by 15,900 people (2.8%). By comparison, population growth in all Australian capital city SDs increased by 2.3% and by 1.9% in the remainder of Australia.
- The South West SD had the fastest growth in the state, increasing by 4% (9,500 people) with almost all Local Government Areas (LGAs) in this region experiencing growth in 2008-09. Murray (S) grew the fastest (6.5%), and Mandurah (C) gained the most people (3,300).
- After the South West and Perth, Pilbara was the state's third fastest-growing SD, with 3.1% growth, followed by Lower Great Southern (2.2%) and Kimberley (2.1%).

LGAs WITH LARGEST AND FASTEST POPULATION GROWTH(a), Western Australia

Local Government Area (LGA)	Population Change 2008-2009p		
	2009p	no.	%
LARGEST GROWTH			
Wanneroo (C)	144 100	9 500	7.1
Stirling (C)	198 800	5 000	2.6
Swan (C)	110 100	4 300	4.1
Rockingham (C)	100 200	3 900	4.1
Cockburn (C)	88 700	3 800	4.5
FASTEST GROWTH(b)			
Perth (C)	17 100	1 900	12.8
Serpentine-Jarrahdale (S)	16 500	1 200	7.6
Wanneroo (C)	144 100	9 500	7.1
Murray (S)	14 800	900	6.5
Capel (S)	12 700	720	6.0

(a) Based on Estimated Resident Population. Estimates for 2009 are preliminary.

(b) Excludes LGAs with a population of less than 2,000 as at 30 June 2008.

Source: *Regional Population Growth, Australia, 2008-09* (cat. no. 3218.0).

- In the Perth SD the largest population growth occurred in the outer suburban fringes, with the Cities of Wanneroo (9,500), Stirling (5,000) and Swan (4,300) recording the largest increases in 2008-09. Additionally, Rockingham (C), Cockburn (C) and Gosnells (C) each grew by more than 3,000 people over the same period.
- The City of Perth grew by almost 13%, making it the fastest growing LGA in WA in 2008-09 and the fastest growing capital city LGA in Australia for the sixth consecutive year. The next fastest growing LGAs in the state were Serpentine-Jarrahdale (S) (7.6%) and Wanneroo (C) (7.1%).
- Outside of capital city SDs, the largest population growth in 2008-09 generally occurred along the Australian coast. Many coastal LGAs in Western Australia were among the fastest-

growing in Australia. Rapid population growth occurred in 2008-09 in the LGAs of Capel (S) (6%), Mandurah (C) (5%) and Port Hedland (T) (5%).

- Almost one-third of LGAs outside the Perth metropolitan area declined or had no change in their populations during the year to June 2009. Of these, over half already had populations below 1,000 people.

MEDIAN AGE AND SEX RATIO, Statistical Divisions - Western Australia

	Median Age (years)(a)		Sex Ratio (b)	
	2009	2004	2009	2004
Perth	35.8	35.8	100.9	99.0
South West	39.5	38.6	103.6	102.1
Lower Great Southern	39.9	38.6	105.5	103.7
Upper Great Southern	39.4	37.9	107.0	107.9
South Eastern	32.2	31.8	114.8	114.2
Midlands	41.5	39.0	109.9	109.7
Central	36.8	35.5	109.0	107.4
Pilbara	31.5	30.7	129.2	124.7
Kimberley	30.5	29.2	111.2	111.4
Western Australia	36.2	35.8	102.8	101.1

(a) the age at which half the population is younger and half is older.

(b) the number of males for every 100 females.

Source: *Population by Age and Sex, Regions of Australia* (cat. no. 3235.0).

- The median age in WA increased slightly to 36.2 years in the five years to June 2009. The median age for males was 35.5 years and for females 36.9 years.
- At the Statistical Division (SD) level, Midlands had the highest median age (41.5 years) in June 2009 and also the largest increase in median age (2.5 years) since June 2004. The Lower and Upper Great Southern SDs, as well as the South West and Central SDs, also had median ages above the state average in 2009. The Kimberley and Pilbara SDs has the lowest median ages (30.5 and 31.5 years respectively).
- Across WA the sex ratio in June 2009 was 102.8 males for every 100 females. This sex ratio was 1.7 points higher than in 2004. As natural increase (births minus deaths) was quite similar for males and females in the five years to June 2009, the higher sex ratio was due to higher net migration of males into WA.
- The sex ratio varied markedly within the state, although all SDs recorded a ratio over 100 (more males than females). The highest ratios were for the Pilbara SD (129.2), South Eastern SD (114.8) and Kimberley SD (111.2). All of these SDs contain Local Government Areas (LGAs) with extensive (male dominated) resource activity. The Perth SD had the lowest sex ratio (100.9), reflecting more even numbers of males and females.

This link takes you to data cubes from *Regional Population Growth, Australia, 2008-09* (cat. no. 3218.0). These data cubes provide times series ERP at various geographical levels in Australia, including Local Government Areas, Statistical Local Areas and Statistical Districts.

The Downloads page of *Population by Age and Sex, Regions of Australia, 2009* contains data cubes with age and sex breakdowns at various geographic levels in Australia.

The Summary pages of the above publications also contain more detailed commentary on the population distribution for Western Australia as well as for other States and Territories.

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Births

BIRTHS**BIRTHS, Western Australia**

	Unit	2009	2008	1999
Crude birth rate(a)	rate	13.7	14.6	13.4
Total fertility rate(b)				
All births	rate	1.959	2.101	1.788
Births to Indigenous women(c)	rate	3.058	3.160	2.388
Registered births				
Total	no.	30 878	31 850	24 849
Nuptial	no.	19 040	19 713	16 458
Ex-nuptial	no.	11 838	12 137	8 391
Life expectancy at birth(d)				
Males	years	79.5	79.3	76.4
Females	years	84.1	84.0	82.1

(a) Number of births registered in the calendar year per 1,000 of the estimated resident population at 30 June of that year.

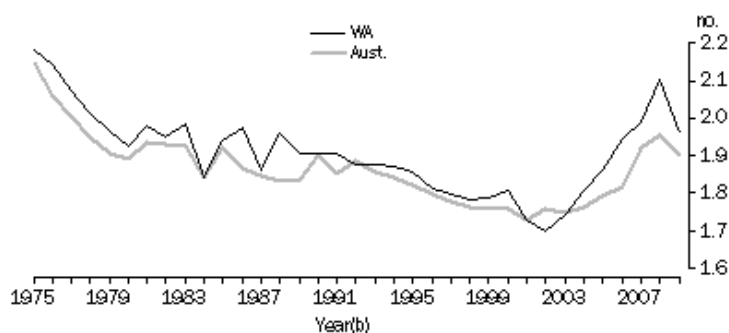
(b) The sum of age-specific fertility rates (live births at each age of mother per 1,000 of the estimated female population of women of that age). It represents the number of children a female would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

(c) Due to changes in coverage of Indigenous births, care should be taken when interpreting changes in the fertility of Indigenous mothers over time.

(d) Based on death rates over a three year period during which mortality has remained much the same: 2007-2009, 2006-2008 and 1997-1999.

Source: *Births, Australia* (cat. no. 3301.0); *Australian Historical Population Statistics* (cat. no. 3105.0.65.001); *Life Tables, Western Australia* (cat. no. 3302.5.55.001)

- In 2009, the number of births in WA was 3.1% lower than the number registered in 2008. This was a substantial annual decrease when compared with a national decrease of 0.3%.
- From 2008 to 2009, the fall in nuptial births (-3.4%) was larger than the fall in ex-nuptial births (-2.5%). Ex-nuptial births made up around 38% of all births in 2009, compared with 34% in 1999.
- Births to Indigenous women made up approximately 8% of total births in WA in 2009, with the total fertility rate (TFR) for Indigenous women being considerably higher than for the total female population of the state.
- In 2009, the life expectancy of a child born between 2007 and 2009 was estimated to be 79.5 years for boys and 84.1 years for girls. In 1999, life expectancy at birth was just over three years lower for boys (76.4) and two years lower for girls (82.1).

Total Fertility Rate, 1975-2009(a)

(a) Births per woman
(b) Year ending 30 June.

Source: *Australian Historical Population Statistics* (cat. no. 3105.0.65.001)

- In 2002, fertility in WA reached an historic low of 1.70 babies per woman. For the next six years, the total fertility rate (TFR) trended upwards, reaching 2.10 babies per woman in 2008, well above the national average of 1.96. In 2009, the TFR dropped to 1.96 for WA, compared with 1.90 for Australia.

BIRTHS AND FERTILITY RATES, by Age of Mother

	Unit	2009	2008	1999
Age of mother				
15-19 years	no.	1 514	1 686	1 401
35 years and over	no.	6 428	6 817	3 892
Age-specific fertility(a)				
15-19 years	rate	20.1	22.7	21.7
35 years and over	rate	26.5	28.7	18.2
Median age of mother				
Total	years	30.2	30.3	29.4
Indigenous	years	24.2	24.2	24.4

(a) Live births per 1,000 women of that age
Source: *Births, Australia* (cat. no. 3301.0)

- The fall in the total number of births in WA from 2008 to 2009 was driven by a 10% decrease in births to women aged 15-19 years and a 5.7% decrease in births to women aged 35 years and over. Births in both of these age brackets, along with the corresponding age-specific fertility rates, had been increasing in recent times.
- Women aged 30-34 years continued to record the highest fertility rate of all age groups, with births to these mothers comprising almost 31% of all WA births in 2009. However, the fertility rate of this age group decreased in 2009 to 124.8 births per 1,000 women, after peaking at 131.0 births in the previous year.
- In 2009, the median age of women who gave birth in WA was 30.2 years, compared with the median age of 29.4 in 1999. The median age has fallen slightly since 2005 when it peaked at 30.4 years. By comparison, the median age for Indigenous mothers in 2009 was still only 24.2 years.
- The median age of women who gave birth in a nuptial relationship (31.7 years) was over five years older than those who gave birth in an ex-nuptial relationship (26.5 years).

The following link takes you to summary births data (1998-2008) for Australian states and territories for total populations (Table 1) and for Indigenous populations (Table 9) on the Downloads page of *Births, Australia, 2009* (cat. no 3301.0).

The next link takes you to historical data from *Australian Historical Population Statistics* (cat. no 3105.0.65.001).

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Deaths

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DEATHS

DEATHS, Western Australia - 2009

Selected indicators	2009	2008	1999
---------------------	------	------	------

Standardised death rate(a)	5.6	5.9	6.9
Infant mortality rate(b)			
Total(c)	3.0	3.5	5.0
Indigenous	7.7	10.1	15.8
Non-indigenous	2.7	3.0	4.3
Median age at death			
Males	76.5	76.3	74.3
Females	83.2	83.7	81.5

(a) Deaths per 1,000 standard population. Standardised death rates use total persons in the 2001 Australian population as the standard population.

(b) Number of infants deaths per 1,000 live births registered. Due to relatively small numbers of indigenous infant deaths registered, mortality rates relate to deaths over a three-year period, in this instance 2007-2009; 2006-2008; and 1997-1999.

(c) Includes infants for whom Indigenous status was not provided.

Source: *Deaths, Australia, 2009* (cat. no 3302.0).

- In 2009, the standardised death rate for Western Australia continued to decline, falling to 5.6 from 5.9 in 2008 and 6.9 in 1999.
- Similarly, the infant mortality rate has also been declining over the past ten years. In particular, the Indigenous infant mortality rate has more than halved over the period (from 15.8 in 1999 to 7.7 in 2009). However the Indigenous rate is still more than double the rate for all infants in the state.
- The median age at death continues to be higher for females than males in WA by about seven years.

This link takes you to data cubes on the Downloads page of *Deaths, Australia, 2009* (cat. no. 3302.0) including Death rates (1999-2009); Life expectancy and Infant mortality (including some data for the Indigenous population).

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Causes of Death

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CAUSES OF DEATH

CAUSES OF DEATH (a) (b), Western Australia

	Unit	1998	2005	2006	2007	2008(c)
Leading causes of death (all deaths) and ICD code						
Cancer (C00-C97)	%	27.9	30.8	31.2	30.5	29.6
Ischaemic heart disease (I20-I25)	%	20.7	17.5	16.3	16.2	15.4
Stroke (I60-I69)	%	9.2	7.4	7.6	6.9	7.7
Selected cancer and ICD code						
Male lung cancer (of male deaths) (C33-C34)	%	6.9	7.9	7.4	6.8	6.5
Female lung cancer (of female deaths) (C33-C34)	%	3.7	4.8	4.7	5.0	4.6
Female breast cancer (of female deaths) (C50)	%	4.3	4.4	np	4.3	4.1
Prostate cancer (of male deaths) (C61)	%	3.0	3.9	4.1	3.5	3.9
Skin cancer (of all deaths) (C43)	%	0.8	1.2	1.1	1.0	1.0
Heart disease						
Male ischaemic heart diseases (of male deaths) (I20-I25)	%	21.4	17.9	17.5	17.4	15.8

Female ischaemic heart diseases (of female deaths) (I20-I25)	%	19.8	17.1	14.8	14.8	14.8
Transport accidents (V01-V99)						
Males (of male deaths)	%	2.9	2.2	2.7	3.3	2.6
Females (of female deaths)	%	1.3	1.0	0.9	1.0	1.0
Intentional self harm (X60-X84) (d)						
Males (of male deaths)	%	4.1	2.8	2.5	3.1	3.5
Females (of female deaths)	%	1.1	0.6	0.9	1.0	1.1
Total male deaths	no.	5 750	5 974	6 186	6 448	6 692
Total female deaths	no.	4 914	5 323	5 457	5 835	6 060

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Causes of death statistics have been compiled in respect of the state or territory of usual residence of the deceased.

(b) Causes of death data for 2008 are subject to revision. See Explanatory Notes 3-4 in the source publication for further information

(c) See Explanatory Notes 67-82 in the source publication for further information on specific issues relating to 2008 data.

(d) Care needs to be taken in interpreting figures relating to suicide due to limitations of the data. See Explanatory Notes 78-79 and Technical Note: ABS coding of suicide deaths in source publication.

Sources: *Causes of Death, Australia, 2008* (cat. no. 3303.0).

- In 2008, there were 12,752 deaths registered in WA. The main causes of death were cancer (malignant neoplasms), ischaemic heart disease and stroke, together accounting for more than half (53%) of all deaths. Transport accidents were responsible for 234 deaths (1.8%).
- The proportion of deaths caused by cancer (30%) was slightly higher than in 1998 (28%). By contrast, ischaemic heart disease (15%) and stroke (8%) accounted for a smaller proportion of deaths in 2008 than in 1998 (21% and 9% respectively).
- In 2008, there were 179 registered deaths of young people aged 15-24 years, with males accounting for 70% of deaths in this age group. The main causes of death for young people were transport accidents and intentional self harm (suicide). In 2008, a third (32%) of deaths of young people were due to accidents where the person was either an occupant of a car or a motorcycle rider, a higher proportion than in 2007 (25%).
- Suicide deaths in 2008 were much higher for males than females in this younger age group. Of the 45 deaths caused by 'intentional self harm' among persons aged 15-24 years, 34 were male and 11 were female. Suicide accounted for 27% of male deaths in this age group compared with 20% of female deaths, similar to the proportions in 2007.

This link takes you to data cubes on the Downloads page of *Causes of Death, 2008*.

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Social Trends

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SOCIAL TRENDS

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Marriages and Divorces

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MARRIAGES AND DIVORCES

MARRIAGES AND DIVORCES, Western Australia - 2009

Selected indicators	Unit	2009	2008	1999
Crude marriage rate(a)	rate	5.4	5.7	5.5
Crude divorce rate(b)	rate	2.1	2.2	2.8
Median age at first marriage				
Males	years	29.9	29.9	28.5
Females	years	27.9	27.8	26.5

(a) Number of marriages registered in the calendar year per 1,000 of the estimated resident population at 30 June of that year.

(b) Number of divorces granted in the calendar year per 1,000 of the estimated resident population at 30 June of that year.

Source: *Marriages and Divorces, Australia, 2009* (cat. no. 3310.0); *Marriages, Australia, 2007* (cat. no 3306.0.55.001).

- Over the last few decades the median age at first marriage has increased for both sexes, reaching 29.9 years for males and 27.9 years for females in 2009.
- The crude marriage rate was 5.4 marriages per 1,000 of the estimated resident population in 2009, down from 5.7 in 2008 but only marginally lower than a decade before.
- The crude divorce rate decreased steadily over the last decade, falling from 2.8 in 1999 to 2.1 in 2009, the lowest rate of the last 20 years.

The following link takes you to the most recent data from the Downloads page of *Marriages and Divorces, Australia, 2009* (cat. no. 3310.0).

The second link takes you to earlier data from the Downloads page of *Marriages, Australia, 2007* (cat. no. 3306.0.55.001).

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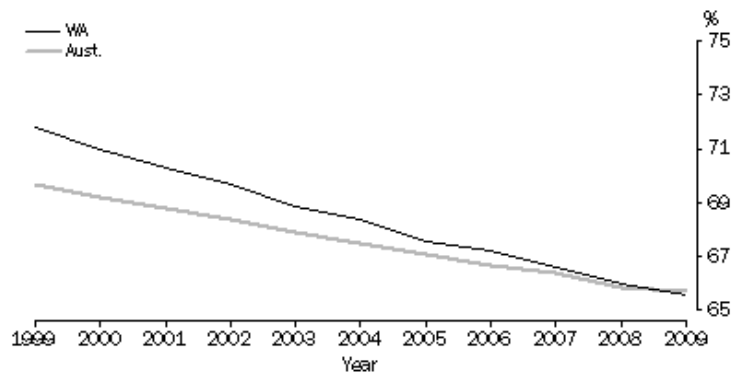
Education and Training

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EDUCATION AND TRAINING

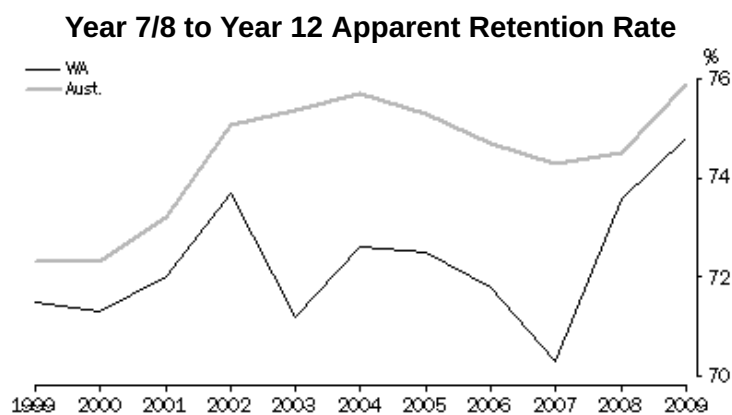
- In 2009, there were 356,000 primary and secondary students attending school full-time in WA, 6,000 more than in 2008. Of these school students, two-thirds (66%) were attending government schools, a proportion that has steadily declined over the past decade, from 72% in 1999.

Full-time Students Attending Government Schools



Source: Education and training - National and state summary tables (cat. no. 4102.0)

- The apparent retention rate from Year 7/8 to Year 12 for all students in WA rose to 75% in 2009. This rate had been generally declining in WA in recent years, falling to a low of 70% in 2007, before rising to almost 74% in 2008. These recent increases have resulted in the Year 7/8 to Year 12 apparent retention rate in WA moving closer to the national rate of 76% in 2009.



Source: Education and training - National and state summary tables (cat. no. 4102.0)

- In 2009, the Year 7/8 to Year 12 apparent retention rate for males rose marginally, from 68% to 69%, while for females it rose from just under 80% to 81%.
- For Indigenous students in WA, the apparent retention rate from Year 7/8 to Year 12 was 38% in 2009, almost half the rate for all students in WA (75%). However, the apparent retention rate for Indigenous students has almost doubled since 1999 (20%).
- Almost 55% of all 15-24 year olds in WA were participating in education in 2009, increasing from 52% in 2008. Nationally, 58% of this age group were participating in education in 2009.
- In 2009, 14% of persons in WA aged 15-19 years were not fully engaged in education and/or employment. While this represented an increase from 13% in 2008, it was below the national rate of 15%. Of all states and territories, Victoria and the ACT were the only jurisdictions to record lower rates than WA in 2009.
- In 2009, 62% aged 25-64 years in WA had obtained a non-school educational qualification, increasing from 59% in 2008. Of these, almost one quarter (25%) had obtained a Bachelor degree or above while 38% had an Advanced diploma or lower qualification.

The link below provides time series data (1999 to 2009) on a Summary of Education and Training statistics from *Australian Social Trends, Data Cube - Education and training - National and state summary tables* (cat. no. 4102.0).

RECORDED CRIME - VICTIMS

- In 2009, the number of crime victims recorded by the Western Australia Police decreased for most offences including Homicide and related offences; Sexual assault; Robbery; Unlawful entry with intent; Motor vehicle theft; and Other theft.
- The single exception was Assault for which the number of victims increased in 2009.
- For less common offences such as Kidnapping/abduction and Blackmail/extortion, the number of victims decreased slightly or remained similar to the 2008 level.

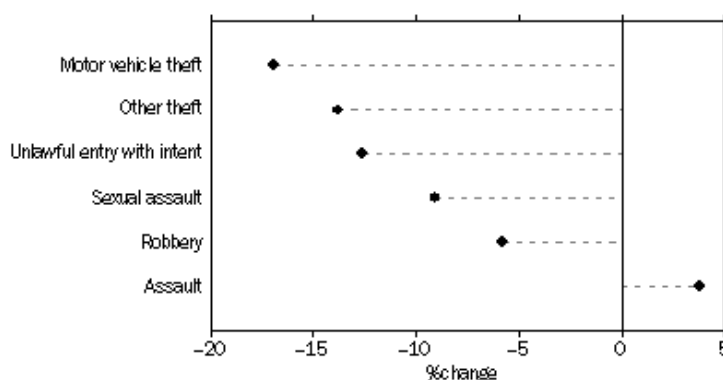
VICTIMS(a), Selected offences - Western Australia

	2009 no.	2008 no.	2007 no.
Homicide and related offences	30	41	43
Assault	21 936	21 142	21 441
Sexual assault	1 667	1 834	1 990
Kidnapping/abduction	25	29	36
Robbery	1 589	1 686	1 849
Blackmail/extortion	98	99	102
Unlawful entry with intent	33 176	37 973	37 755
Motor vehicle theft	6 460	7 774	7 300
Other theft	70 098	81 278	78 399

(a) The definition of 'Victim' varies according to the category of offence (see Glossary of source publication).
Source: *Recorded Crime - Victims, Australia, 2009* (cat. no. 4510.0).

- Among the more common offences, Motor vehicle theft showed the largest proportional decrease, with 17% fewer victims in 2009 than 2008.
- Significant decreases were also recorded in 2009 for Other theft and Unlawful entry with intent, where the number of victims fell by almost 14% and 13% respectively.
- The number of Sexual assault victims, after falling almost 8% in 2008, fell by another 9.1% in 2009.
- For victims of robbery, the number fell a further 5.8% in 2009 after a slightly larger fall in the previous year.
- In 2009, the number of Assault victims increased by almost 4%.

Victims, Selected Offences - Percentage change 2008 to 2009



Source: *Recorded Crime - Victims, Australia* (4510.0)

The link below takes you to the most recent data (2000 to 2009) on selected offences for *Recorded Crime - Victims, Australia, 2009* (cat. no. 4510.0). Select the Data Cube containing states and territories data (Publication tables 3.1-3.8). Table 5 contains the Western Australian data.

Employment and Earnings

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EMPLOYMENT AND EARNINGS

This section contains the following subsection :

- Labour Force Status
- Industry of Employment
- Average Weekly Earnings
- Job Vacancies
- Personal Income for Small Areas

Labour Force Status

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LABOUR FORCE STATUS

DECEMBER KEY FIGURES, Western Australia

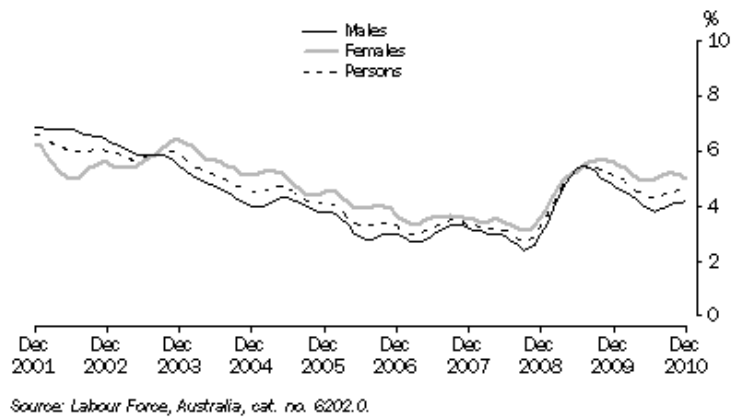
	Dec 2010	Nov 2010	Dec 2009
Trend			
Employed Persons ('000)	1 224.3	1 224.7	1 185.7
Unemployment Rate (%)	4.6	4.6	5.1
Participation Rate (%)	68.4	68.5	68.4
Seasonally Adjusted			
Employed Persons ('000)	1 224.2	1 228.3	1 188.0
Unemployment Rate (%)	4.4	4.5	5.2
Participation Rate (%)	68.3	68.7	68.7

Source: *Labour Force, Australia* (cat. no. 6202.0).

UNEMPLOYED PERSONS

- In December 2010, the unemployment rate for WA remained stable in trend terms (4.6%) and decreased slightly to 4.4% in seasonally adjusted terms. The WA unemployment rate continues to be significantly below the national rate of 5.1% (trend) and 5.0% (seasonally adjusted).

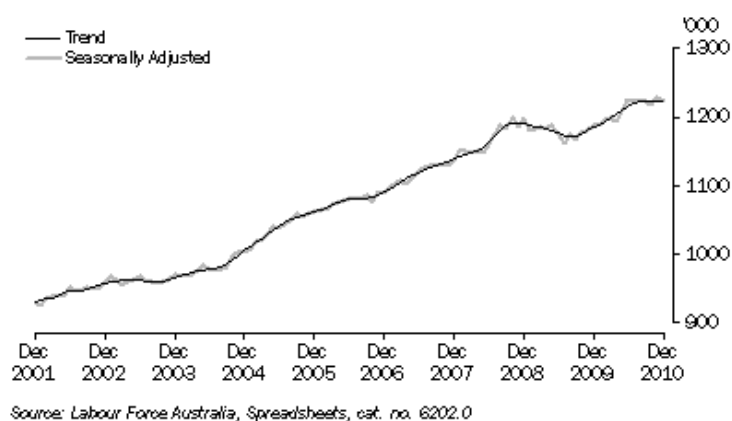
Unemployment Rate: Trend



- After climbing above 10% in the early 1990s, WA's unemployment rate generally declined over the following 15 years, reaching a low of 2.7% (trend estimate) by September 2008. Impacted by the global financial crisis, the trend unemployment rate began to rise sharply from October 2008, increasing to 5.5% in July and August 2009. Thereafter, the rate again followed a downward trend until mid-2010, with a slight rise to 4.6% by November 2010. This remained unchanged for December.
- As a consequence of the male-dominated resources boom, the unemployment rate remained lower for males than females from late 2003 for about five years. The economic downturn in late 2008, and associated job losses in mining and mining support activities, resulted in the gap between males and females narrowing briefly, with the unemployment rate for both sexes rising to 5.5% by July 2009.
- The recovery of the labour market from that time to mid-2010 was stronger in the male-dominated industries, causing the gap between male and female unemployment rates to widen again. However, the male unemployment rate rose slightly towards the end of 2010, thereby marginally narrowing the gap. By December 2010, the unemployment rate was 4.2% for men, compared with 5.0% for women.

EMPLOYED PERSONS

Employed Persons



- The number of employed persons fell by 20,600 between November 2008 and August 2009. During this period, when the global financial crisis was having its strongest impact on the WA economy, there was a large fall in full-time employment, which was partially offset by a rise in part-time employment.
- Over the 12 months to December 2010, the trend estimate of employed persons increased by 38,600, comprising 36,500 in full-time employment and 2,100 in part-time employment. Following steady increases in the number of employed persons through much of 2010, the

trend has flattened in recent months.

- The relatively unchanged trend estimate for employed persons was a result of the fall in seasonally adjusted terms that partly offset previous increases. In December 2010, the monthly seasonally adjusted figure decreased by 4,100. This was driven down by a drop in full-time jobs (6,000).

This link provides access to time series spreadsheets from *Labour Force, Australia, December 2010* (cat. no 6202.0). The statistics provided in this overview are taken from Table 8, which is one of several tables containing data for WA.

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Industry of Employment

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INDUSTRY OF EMPLOYMENT

EMPLOYED PERSONS By Industry - Western Australia: Original data

Industry(a)	Nov 10 '000	Aug 10 '000	Nov 09 '000
Agriculture, forestry and fishing	47.1	40.3	38.1
Mining	86.9	86.9	65.0
Manufacturing	84.9	87.7	97.4
Electricity, gas, water and waste services	16.5	17.9	12.2
Construction	137.5	128.1	127.0
Wholesale trade	40.9	37.7	41.6
Retail trade	120.4	129.5	128.2
Accommodation and food services	69.5	72.8	73.4
Transport, postal and warehousing	52.0	61.6	58.3
Information media and telecommunications	15.6	11.4	18.1
Financial and insurance services	30.9	32.4	27.3
Rental, hiring and real estate services	22.0	20.4	19.2
Professional, scientific and technical services	93.4	91.7	85.2
Administrative and support services	44.1	35.8	39.4
Public administration and safety	68.5	74.2	64.2
Education and training	97.6	94.7	98.4
Health Care and social assistance	120.7	115.6	115.1
Arts and recreation services	18.6	22.1	20.0
Other services	58.6	57.5	49.3
Total	1 225.8	1 218.4	1 177.4

(a) Industry estimates are classified to the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006.
Source: *Labour Force, Australia, Detailed, Quarterly* (cat. no. 6291.0.55.003).

- In the November quarter 2010, the number of employed persons in WA increased by 7,400 (0.6%) in original data terms.
- The industries recording the largest quarterly employment growth were Construction (up 9,400 persons, 7%); Administrative and support services (up 8,300 persons, 23%); Agriculture, forestry and fishing (up 6,800 persons, 17%) and Health care and social assistance (up 5,100 persons, 4.4%).
- In contrast, the industries which recorded the largest quarterly employment losses were Transport, postal and warehousing (down 9,500 persons, 15%); Retail trade (down 9,100 persons, 7%) and Public administration and safety (down 5,700 persons, 8%).
- In annual terms, employment in the Mining industry experienced strong growth, with 21,800 (34%) more employed persons in the November quarter 2010 than in the corresponding quarter of 2009.

- Strong annual growth was also recorded in Construction (up 10, 500 persons, 8%); Agriculture, forestry and fishing (up 9,000 persons, 23%) and Professional, scientific and technical services (up 8,200 persons, 10%).
- Manufacturing recorded the largest fall over the year to November 2010, down 12,500 persons (13%).
- Other areas to record a decline in annual terms were Retail trade (down 7,800 persons, 6%) and Transport, postal and warehousing (down 6,200 persons, 11%).

This link provides access to labour force data from *Labour Force, Australia, Detailed, Quarterly, November 2010* (cat. no. 6291.0.55.003). Table 5 contains Industry data for WA.

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Average Weekly Earnings

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AVERAGE WEEKLY EARNINGS

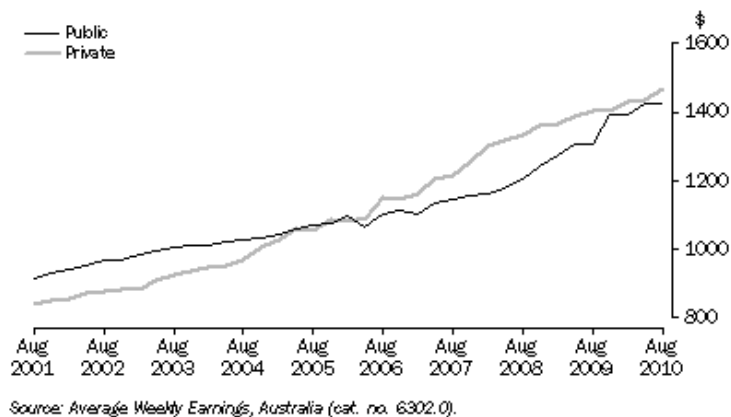
AUGUST KEY FIGURES, Western Australia

	Aug 2010 \$	May 2010 to Aug 2010 % change	Aug 2009 to Aug 2010 % change
Trend			
Full-time adult ordinary time earnings	1 378.90	1.0	5.3
Full-time adult total earnings	1 458.60	1.3	5.6
All employees total earnings	1 071.60	0.8	4.8
Seasonally Adjusted			
Full-time adult ordinary time earnings	1 380.00	1.2	5.7
Full-time adult total earnings	1 461.30	1.8	6.0
All employees total earnings	1 069.50	0.5	4.8

Source: *Average Weekly Earnings, Australia* (cat. no. 6302.0).

- In the 12 months to August 2010, average weekly ordinary time earnings for full-time adults in WA rose by 5.3% in trend terms, compared with a national increase of 4.4%. Similar annual increases were recorded for full-time total adult earnings.
- In the August quarter 2010, the full-time average weekly ordinary time earnings for males was \$1,498 (trend), 32% higher than the equivalent female wage (\$1,138).

Average Weekly Full-time Adult Total Earnings: Original



- As trend and seasonally adjusted figures for WA are not available by sector, the graph above relies on original data. In original terms, average weekly total earnings for full-time adults have continued to be higher for private sector than for public sector workers since May 2006, which is a reversal of the gap during the previous 10 years when average public sector earnings were consistently higher than average private sector earnings.
- By February 2008, the gap in earnings between the private and public sectors (original) had reached \$138 per week. Since that time, the gap in earnings has been variable, increasing to \$45 in August 2010 with a larger quarterly increase in private sector earnings (2.2%) than public sector earnings (0.2%).

This link takes you to time series spreadsheets from *Average Weekly Earnings, Australia, Aug 2010* (cat. no. 6302.0). Tables 11E and 12E contain Average Weekly Earnings, Western Australia in trend and seasonally adjusted terms. Table 14E contains Average Weekly Earnings, Private and Public Sectors for Western Australia.

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Job Vacancies

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JOB VACANCIES

NOVEMBER KEY FIGURES, Western Australia

Original	Nov 2010 '000	Aug 2010 '000	Aug 2010 to Nov 2010 % change
Western Australia	30.3	28.4	6.8
Sector:			
Private	28.5	26.5	7.4
Public	1.9	1.9	-1.3

Source: *Job Vacancies, Australia* (cat. no. 6354.0).

- In WA, there were 30,300 job vacancies in November 2010, 6.8% higher than in August 2010. Nationally, the number of job vacancies increased by the same proportion, reaching almost 194,000.
- Job vacancies in the WA private sector grew by 7.4% to 28,500 in November while public sector vacancies showed minimal change.

The above statistics are taken from *Job Vacancies, Australia, November 2010* (cat. no. 6354.0). The Job Vacancies Survey measures the number of vacancies as at the third Friday of the middle month of each calendar quarter. As a result of the suspension of this survey between August 2008 and August 2009 inclusive, estimates are not available for these five quarters. For more information on this issue, and other factors influencing the interpretation of statistics in *Job Vacancies, Australia*, see the Explanatory Notes on the ABS website.

This link provides access to data from *Job Vacancies, Australia, Nov 2010* (cat. no. 6354.0). Tables 1-3 contain data for WA.

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Personal Income for Small Areas

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PERSONAL INCOME FOR SMALL AREAS

AVERAGE INCOME, 2007-08

	Wages & salaries	Income from all sources (a)
	\$	\$
Western Australia	46 199	47 488
Perth	46 804	48 588
Balance of WA	44 266	44 113
Australia	43 921	44 402

(a) excludes Government pensions and allowances

Source: *Estimates of Personal Income for Small Areas, Time Series 2003-04 to 2007-08* (cat. no. 6524.0.55.002).

- Of the states and territories, WA recorded the second highest average total income (\$47,488) behind the Australian Capital Territory (\$52,330). Contributing to WA's relatively high average total income were key mining regions outside the Perth metropolitan area, particularly the Pilbara. This resulted in the Balance of WA having a higher average income (\$44,113) than non-capital city areas in other jurisdictions.
- Average income from wages and salaries was also highest in the Australian Capital Territory, followed by New South Wales and WA.

AVERAGE INCOME, Top 10 SLAs, 2007-08

Statistical Local Area	Wages & salaries	Income from all sources (a)
	\$	\$
Peppermint Grove	72 637	100 075
Cottesloe	71 793	98 219
Roebourne	70 180	70 261
Ashburton	69 352	66 894
East Pilbara	66 469	65 354
Port Hedland	63 661	63 816
Subiaco	63 651	72 709
Nedlands	62 759	82 840
Coolgardie	62 080	60 227

(a) excludes Government pensions and allowances

Source: *Estimates of Personal Income for Small Areas, Time Series 2003-04 to 2007-08* (cat. no. 6524.0.55.002).

- Within Perth, average income from wages and salaries was highest in the western coastal areas of Peppermint Grove, Cottesloe, Subiaco and Nedlands. Average wages and salaries in these areas ranged between \$62,000 and \$73,000 per year.
- Outside Perth, the mining regions of the state had the highest average wages and salaries. These included Roebourne, Ashburton, East Pilbara, Port Hedland, Coolgardie and Leonora., averaging between \$61,000 and \$70,000 per year.

The following link takes you to the Downloads page for *Estimates of Personal Income for Small Areas, Time Series, 2003-04 to 2007-08* (cat. no. 6524.0.55.002). The data cubes provides statistics on personal income for small areas including SLAs and LGAs.

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State Accounts

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STATE ACCOUNTS

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State Final Demand

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STATE FINAL DEMAND

SEPTEMBER KEY FIGURES(a), Western Australia

	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Trend		
Final consumption expenditure		
General government	0.5	2.1
Households	1.1	5.0
Gross fixed capital formation		
Private	1.9	5.5
Public	-1.5	26.8
State final demand	1.2	5.9

Seasonally Adjusted

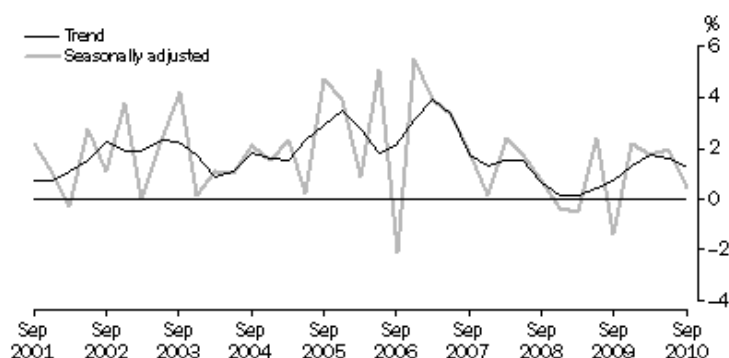
Final consumption expenditure		
General government	0.3	2.1
Households	0.1	4.7
Gross fixed capital formation		
Private	0.6	7.3
Public	2.0	30.9
State final demand	0.4	6.5

(a) Chain volume measures

Source: *Australian National Accounts: National Income, Expenditure and Product*, (cat. no. 5206.0).

- In the September quarter 2010, state final demand in WA (chain volume measures) increased by 1.2% in trend and 0.4% in seasonally adjusted terms. This growth was slower than in the previous three quarters, but equates to an increase of around 6% in both series since the September quarter 2009, the strongest annual growth of all states and territories.
- Final consumption expenditure by households, which makes up about 44% of total state final demand, recorded an annual increase of around 5% in both trend and seasonally adjusted terms. Private gross fixed capital formation, contributing over a third (37%) to state final demand, also recorded steady annual growth (about 6% in trend and 7% in seasonally adjusted terms).

State Final Demand, Chain volume measures - Change from previous quarter



Source: *Australian National Accounts: National Income, Expenditure and Product*, cat. no. 5206.0.

- The quarterly State Final Demand value has not decreased in trend terms in almost 10 years, a record unmatched by any other state or territory. After flattening in late 2008 and early 2009, growth in state final demand began to strengthen again, although a smaller increase (1.2%) in the September quarter 2010 suggests a slowing of this trend.

This link takes you to the Downloads page of *Australian National Accounts: National Income, Expenditure, and Product, Sep 2010* (cat. no. 5206.0). Table 21 provides State Final Demand, Summary Components by State. Table 26 provides State Final Demand, Detailed Components for Western Australia.

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Prices

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PRICES

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House Prices Indexes
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Consumer Price Index

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CONSUMER PRICE INDEX

CONSUMER PRICE INDEX^(a), Perth

	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
All groups	0.5	3.1
Food	-0.5	1.3
Alcohol and tobacco	2.9	11.4
Clothing and footwear	0.1	-0.9
Housing	2.0	5.9
Household contents and services	-0.1	0.4
Health	-0.8	4.2
Transportation	-0.8	0.8
Communication	-0.1	-0.3
Recreation	0.0	-0.3
Education	0.0	7.8
Financial and insurance services(b)	0.0	2.7

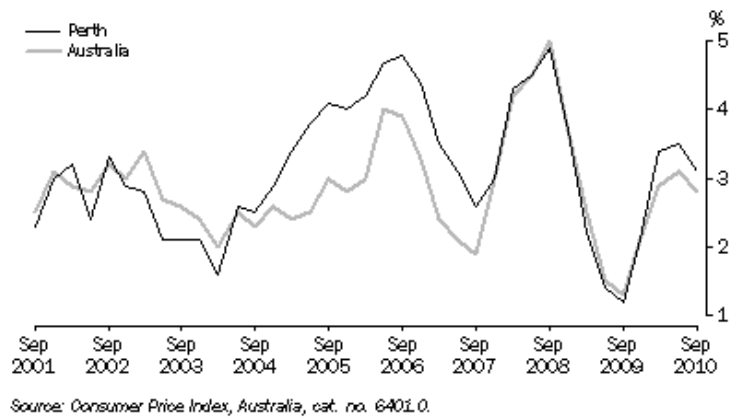
(a) Unless otherwise specified, base of each index: 1989-90 = 100.0.

(b) Base of index: June quarter 2005 = 100.0.

Source: *Consumer Price Index, Australia* (cat. no. 6401.0).

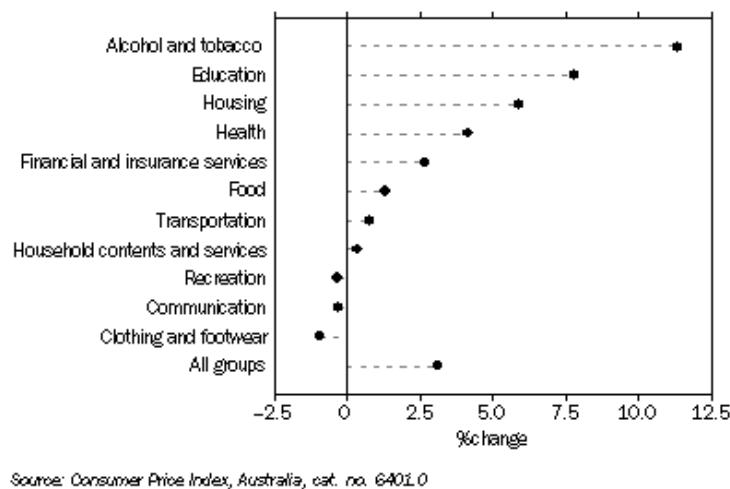
- Perth's Consumer Price Index (CPI) increased 0.5% in the September quarter 2010, the lowest increase among the eight capital cities.
- Most groups recorded only modest change in the September quarter 2010, with the largest increase for Alcohol and tobacco (2.9%) and the largest decreases for Health and Transportation (both -0.8%).

Consumer Price Index (All Groups), Annual change



- In the year to September 2010, Perth recorded the equal highest annual CPI increase, along with Melbourne (both 3.1%), of the Australian capital cities. Others recorded annual increases of between 2% and 3%.
- Driven by escalating housing costs and strong growth in the resources and construction industries between 2005 and 2007, Perth recorded much higher annual CPI increases during those years than occurred in the CPI weighted national average.
- Following the boom period, annual changes in the Perth CPI were similar to the national average. However, in 2010, there has been a return to higher annual CPI changes for Perth than across Australia.

Consumer Price Index, by Group - Change from September qtr 2009 to September qtr 2010



- Over the year to September 2010, the main contributors to Perth's CPI increase were Alcohol and tobacco (11%); Education (8%); and Housing (6%). Clothing and footwear, Communication and Recreation were the only groups to record small decreases over the same period.

CONSUMER PRICE INDEX, Selected Annual Increases and Decreases, September qtr 2009 to September qtr 2010

Increases		Decreases	
Sub-group/Expenditure Class	% change	Sub-group/Expenditure Class	% change

Tobacco	26.6	Audio, visual & computing equip	-18.3
Utilities	19.3	Women's footwear	-12.4
Men's footwear	12.5	Towels and linen	-10.6
Secondary education	10.0	Children's and infants' clothing	-6.7
Pork	7.1	Major household appliances	-6.3

Source: *Consumer Price Index, Australia* (cat. no. 6401.0).

- The annual increase in the consumer price index for Alcohol and Tobacco was driven by the recent government tax on Tobacco, with prices for this sub-group soaring by almost 27% in the last 12 months. Similarly, recent increases in Utilities prices (including electricity, water and gas), were the key drivers of the increase in the price index for Housing.
- The sub-groups to record the largest decreases in the 12 months to September 2010 were for popular retail products, including electronic equipment and household appliances. This reflects the rising Australian dollar reducing the cost of imports and discounting in some areas of the retail industry in order to stimulate consumer activity.

This link takes you to the Downloads page of *Consumer Price Index, Australia, Sep 2010* (cat. no. 6401.0).

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House Prices Indexes

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HOUSE PRICE INDEXES

HOUSE PRICE INDEXES(a), Perth

	Sep qtr 2010 index no.	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Established houses (b)	p209.0	p0.4	p9.4
Project homes	159.2	0.4	3.3

p preliminary figure or series subject to revision

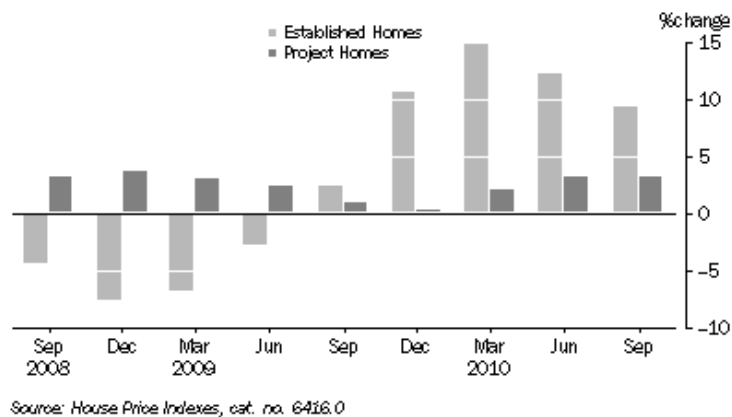
(a) Base of each index 2003-04 = 100.0.

(b) Estimates for the two most recent quarters are experimental (see paragraph 12 and 13 of the Explanatory Notes in the source publication).

Source: *House Price Indexes, Eight Capital Cities* (cat. no. 6416.0).

- In the September quarter 2010, Perth was one of only three capital cities to record an increase in its preliminary established house price index.
- Perth's price index for project homes increased by 0.4% in the September quarter 2010, similar to the weighted average for the eight capital cities (0.5%).

House Price Index, Annual Change: Original



- The project homes index has been relatively stable for the past few years, with annual increases of less than 4%. This followed a period of strong growth between 2004 and 2007, when annual increases in Perth's house price index were over 10% as growth in the mining and resources industries created a housing boom.
- In contrast, the established house price index has exhibited greater volatility over recent years. The 9% rise in this index for the year to September 2010 contrasts with a 2.4% increase over the corresponding year to September 2009, and a 4.6% fall in the year to September 2008.

ESTABLISHED HOUSE TRANSFERS(a), Perth

Original		Median Price \$000	Total no.
2009			
	March	439.0	5 896
	June	455.0	7 134
	September	473.0	7 687
	December	505.0	6 625
2010			
	March	517.0	6 347

(a) Both series (median price and total number of established house transfers) are based on house sales data provided by the Valuers-General (VGs) Office in each State/Territory, and are only available for those quarters for which final index estimates are available.

Source: House Price Indexes, *Eight Capital Cities* (cat. no. 6416.0).

- In the March quarter 2010, the median price of established house transfers in Perth increased by 2.4%. This was the fifth consecutive quarterly increase, after the median price fell by over 11% through 2008.
- While the median price of established house transfers increased in the March quarter 2010, the number of these transfers decreased for the second consecutive quarter, reflecting interest rate increases and the end of government stimulus initiatives in a post-GFC environment.

This link takes you to time series spreadsheets from *House Price Indexes: Eight Capital Cities, Sep 2010* (cat. no. 6416.0).

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Price Indexes of Materials Used in Building

PRICE INDEXES OF MATERIALS USED IN BUILDING

PRICE INDEXES OF MATERIALS USED IN HOUSE BUILDING^(a), Perth

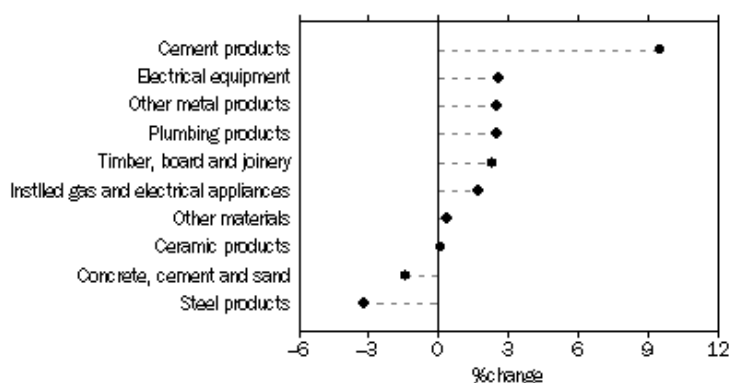
Material group	Jun Qtr 2010 to Sep Qtr 2010 % change	Sep Qtr 2009 to Sep Qtr 2010 % change
All groups	0.1	0.9
Timber, board and joinery	1.2	2.3
Ceramic products	0.1	0.1
Concrete, cement and sand	-0.4	-1.4
Cement products	0.0	9.5
Steel products	0.4	-3.2
Other metal products	-0.1	2.5
Plumbing products	0.4	2.5
Electrical equipment	1.4	2.6
Installed gas and electrical appliances	0.3	1.7
Other materials	-0.9	0.4

(a) Reference base of each index: 1989-90 = 100.0

Source: *Producer Price Indexes, Australia* (cat. no. 6427.0).

- In the September quarter 2010, the increase in the price index of materials used in house building in Perth (0.1%) was below the weighted average increase of the six State capital cities (0.4%).
- The quarterly increase in the Perth index was driven by increases in the price of Electrical equipment and Timber, boards and joinery. These increases were partially offset by decreases in other prices, particularly for Concrete, cement and sand.
- The Perth index for September quarter 2010 was 0.9% higher than for the same quarter of the previous year. Of the six State capital cities, Perth had the lowest annual increase.

Price Indexes of Selected Materials Used in Building, Perth - Change from Sep 2009 to Sep 2010



Source: *Producer Price Indexes* (Cat. No. 6427.0)

- After remaining relatively stable for several years, the price index for Cement products rose by 9.5% in the year to September 2010. Most of this increase occurred in the June quarter 2010.
- The only material groups to record decreases in the year to September 2010 were Steel products (-3.2%) and Concrete, cement and sand (-1.4%).

This link takes you to *Producer Price Indexes, Sep 2010* (cat. no. 6427.0). Tables 16 and 17 contain data on prices of materials used in house building.

Wage Price Index

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WAGE PRICE INDEX

SEPTEMBER KEY FIGURES, Western Australia

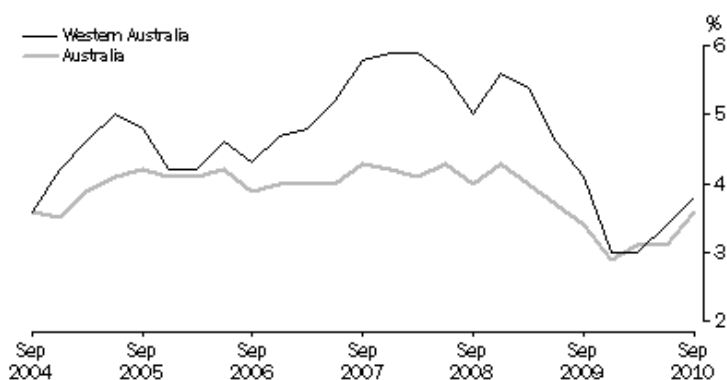
Original	Sep qtr 2010 index no. (a)	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Western Australia	106.0	1.2	3.8
Sector:			
Private	105.6	1.2	3.7
Public	107.4	1.0	4.3

(a) Base of each index 2008-09 = 100.0.

Source: *Labour Price Index, Australia* (cat. no. 6345.0).

- In the September quarter 2010, the Wage Price Index (WPI) for WA increased by 1.2%, which was below the national increase (1.4%). Of the states and territories, the ACT had the highest quarterly increase (1.8%), while Tasmania had the lowest (1.0%).
- Through the year to September quarter 2010, the Public sector index rose by 4.3%, compared with 6.2% through the year to September quarter 2009. The Private sector through the year movement of 3.7% was slightly higher than the previous year to September quarter 2009 (3.4%).
- The narrowing of the gap between the Public and Private sector can be attributed, in part, to the recovery of the economy, and the impact of the introduction of Fair Work Australia. The Public sector has a higher proportion of jobs covered by Certified Agreements which tend to cover longer time frames and were therefore less impacted by the global financial crisis than the relatively informal agreements used widely in the private sector.

Wage Price Index, Annual Change: Original



Source: *Labour Price Index, Australia*, (cat. no. 6345.0.)

- Through the year to September quarter 2010, the WPI increased 3.8% for Western Australia and 3.6% nationally.
- From 2006 to 2009, through the year increases in the WPI were higher for Western Australia

than for Australia. This gap narrowed from the March quarter 2009, with Western Australia falling just below Australia for the first time in almost six years in the March quarter 2010. Since the June quarter 2010, the through the year increase for Western Australia has returned to being above that for Australia.

TOTAL HOURLY RATES OF PAY EXCLUDING BONUSES(a)

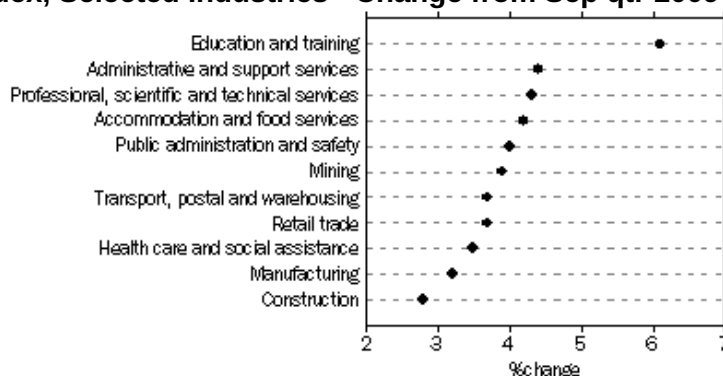
Selected Industries	Sep qtr 2010 index no.	Jun qtr 2010 index no.	Mar qtr 2010 index no.	Dec qtr 2009 index no.	Sep qtr 2009 index no.	Jun qtr 2010 to Sep qtr 2009 % Change	Sep qtr 2009 to Sep qtr 2010 % Change
Mining	105.4	104.7	103.6	102.1	101.4	0.7	3.9
Manufacturing	105.0	103.8	103.1	102.1	101.7	1.2	3.2
Construction	104.9	104.2	103.0	102.4	102.0	0.7	2.8
Retail trade	106.4	104.0	103.7	103.2	102.6	2.3	3.7
Accommodation and food services	105.6	103.8	102.4	101.9	101.3	1.7	4.2
Transport, postal and warehousing	106.0	104.1	103.7	103.5	102.2	1.8	3.7
Professional, scientific and technical Services	107.2	105.2	103.6	103.0	102.8	1.9	4.3
Administrative and support services	106.9	104.1	103.9	102.8	102.4	2.7	4.4
Public administration and safety	107.0	105.9	104.2	104.0	102.9	1.0	4.0
Education and training	108.0	107.5	106.7	104.8	101.8	0.5	6.1
Health care and social assistance	107.4	105.8	105.0	104.4	103.8	1.5	3.5

(a) Base of each index 2008-09 = 100.0.

Source: *Labour Price Index* special data service. For further information, telephone (08) 9360 5151. Charges will apply.

- The industry classification used in the Wage Price Index was updated for the September quarter 2009 to provide a better reflection of the types of industries in today's economy. To find out more about these changes see: 6345.0.55.001 - *Information Paper: Update on ANZSIC 2006 Implementation for Labour Price Index, 2009*.
- In the September quarter 2010, the highest All sectors quarterly movement was recorded for Administrative and support services (2.7%) and the lowest quarterly movement was Education and training (0.5%).
- Increases through the year ranged from 2.8% for Construction to 6.1% for Education and training.

Wage Price Index, Selected Industries - Change from Sep qtr 2009 to Sep qtr 2010



Source: *Labour Price Index, Australia*, (cat no 6345.0)

This link takes you to the Downloads page of *Labour Price Index, Australia, Sep 2010* (cat no. 6345.0). Data for Western Australia can be found in Tables 2, 3, and 4.

Consumption

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CONSUMPTION

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Retail

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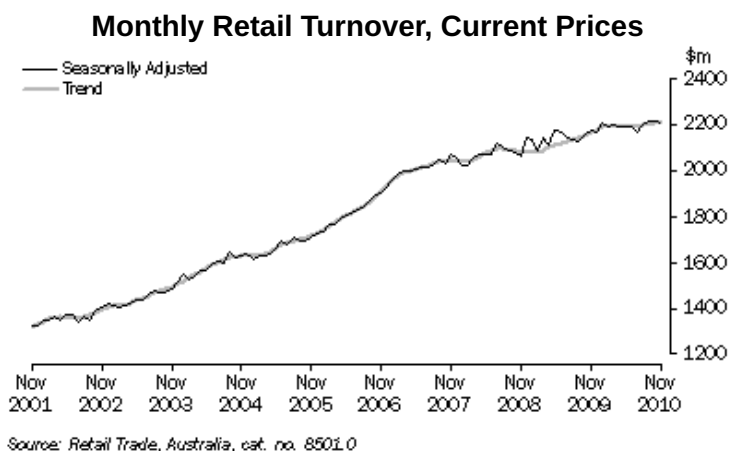
RETAIL

NOVEMBER KEY FIGURES, Western Australia

Turnover at current prices	Nov 2010 \$m	Oct 2010 to Nov 2010 % change	Nov 2009 to Nov 2010 % change
Trend estimates	2 217.6	0.3	2.2
Seasonally adjusted estimates	2 210.9	-0.2	1.5

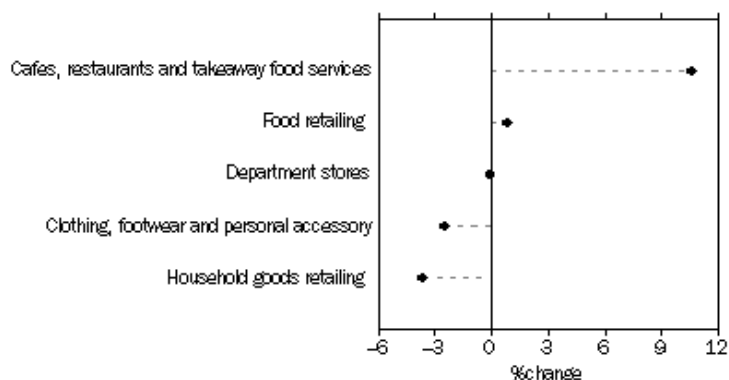
Source: *Retail Trade, Australia* (cat. no. 8501.0).

- While the seasonally adjusted estimate decreased marginally (-0.2%) in November 2010, WA was one of four states to record positive growth in retail turnover in trend terms (0.3%).
- Despite flattening in early 2010, the WA trend estimate rose for four consecutive months to November 2010, to be 2.2% higher than for November 2009.



- Growth in monthly retail turnover in WA slowed following the global economic downturn. In the three years to November 2010, the average monthly increase in turnover was just 0.2%, compared with an average monthly increase of 0.6% during the previous three years.

Retail Turnover, Selected Industries: Seasonally Adjusted - Change from Nov 2009 to Nov 2010



Source: Retail Trade, Australia, cat. no. 8501.0

- The increase in retail turnover between November 2009 and November 2010 (1.5% in seasonally adjusted terms) was predominately driven by increased turnover in Cafes, restaurants and takeaway food services (up 11%).
- For the same period, decreases in turnover were recorded for Household goods retailing (down 3.6%) and Clothing, footwear and personal accessory (down 2.5%) .

This link takes you to time series spreadsheets from *Retail Trade, Australia, Nov 2010* (cat. no.8501.0). Tables 3 and 4 contain monthly turnover data by state. Tables 11-13 contain retail turnover by state and industry.

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New Motor Vehicle Sales

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NEW MOTOR VEHICLE SALES

NOVEMBER KEY FIGURES, Western Australia

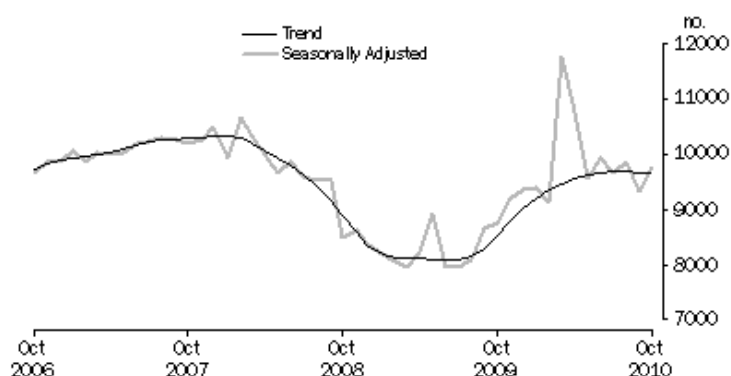
	Nov 2010	Oct 2010 to Nov 2010	Nov 2009 to Nov 2010
	no.	% change	% change
Trend			
Passenger Vehicles	4 897	-0.8	11.5
Sports Utility Vehicles	2 558	1.6	25.0
Other Vehicles	2 211	-0.8	5.9
Total Vehicle Sales	9 666	-0.2	13.4
Seasonally Adjusted			
Passenger Vehicles	5 016	8.7	21.6
Sports Utility Vehicles	2 569	1.7	19.8

Other Vehicles	2 182	-0.5	12.2
Total Vehicle Sales	9 767	4.6	11.5

Source: *Sales of New Motor Vehicles, Australia* (cat. no. 9314.0).

- In November 2010, sales of new motor vehicles in WA decreased marginally in trend terms. The more volatile seasonally adjusted series showed a monthly increase of 4.6% following a 5.3% decrease in the previous month.
- Compared with November of the previous year, November 2010 saw sales for vehicles rise more than 13% in trend terms and more than 11% in seasonally adjusted terms.
- All motor vehicle categories recorded significantly more sales in November 2010 than in November 2009. The largest proportional increase in trend terms was for sales of Sports Utility Vehicles, up 25% over the year.

New Motor Vehicle Sales, Total Vehicles



Source: *Sales of New Motor Vehicles, Australia*, cat. no. 9314.0.

- After peaking at 10,300 (trend) in February 2008, new vehicle sales generally declined for the following 18 months as the global financial crisis took effect, falling below 8,100 in mid-2009. At that time, monthly sales started to rise again but are yet to reach previous peak levels.
- The notable spike in the seasonally adjusted estimate for vehicle sales in April 2010 (to 11,800, an increase of 29% from the previous month) reflected the large number of heavily discounted, hail-damaged cars sold by dealerships after a heavy storm hit the Perth metropolitan area in March.

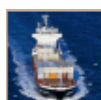
The following links take you to time series spreadsheets from *Sales of New Motor Vehicles, Australia, November 2010* (cat. no. 9314.0). Table 2 contains data by state.

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INTERNATIONAL MERCHANDISE TRADE

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Trade Surplus

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TRADE SURPLUS

SEPTEMBER KEY FIGURES, Western Australia

Original	Sep qtr 2010 \$m	Jun qtr 2010 \$m	Sep qtr 2009 \$m
Exports	27 017.9	27 116.6	17 521.3
Imports	6 028.4	7 098.6	6 605.2
Trade Surplus	20 989.6	20 017.9	10 916.0

Source: ABS data available on request, *International Trade in Goods and Services, Australia* (cat. no. 5368.0).

- In the September quarter 2010, WA recorded a trade surplus of almost \$21 billion. This represented a small increase (4.9%) after a surge in the previous quarter of 48%. In contrast, the Australian trade surplus decreased by 28% to \$66 billion in the September quarter 2010.
- The increase in WA's quarterly trade surplus was due to a decrease in import values (down 15%), slightly offset by a small decrease in export values (down 0.4%).

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Exports

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EXPORTS

MAJOR EXPORT COMMODITIES^{(a)(b)} - Western Australia

Commodities	Sep qtr 2010 \$'000	Jun qtr 2010 \$'000	Sep qtr 2009 \$'000
Iron ore and concentrates	13 640 948	12 796 547	6 971 374
Gold, non-monetary	3 011 425	4 326 059	2 920 308
Crude petroleum oils	2 795 466	2 909 155	1 885 185
Natural gas	2 076 185	1 599 930	1 273 847
Wheat	426 572	377 184	400 835
Nickel ores and concentrates	209 590	228 234	136 886
Liquefied propane and butane	192 611	175 707	172 978
Ores and concentrates of base metal	189 859	188 815	130 200
Live animals	141 396	89 685	113 004
Pigments, paints, varnishes and related materials	124 104	111 331	128 566
Nickel	116 043	181 439	162 416
Total(c)	27 017 936	27 116 552	17 521 306

(a) Care should be taken when comparing with commodities data prior to July 2005. For full details about changes to international trade statistics, users should refer to the Information Paper: Impact of introducing Revision 4 of the Standard International Trade Classification (SITC), 2008 (cat.no. 5368.0.55.10).

(b) Free on board (f.o.b.) value.

(c) Includes commodities not listed.

Source: ABS data available on request, *International Trade in Goods and Services, Australia* (cat. no. 5368.0).

- Iron ore and concentrates continued to be Western Australia's leading export commodity in the September quarter 2010, increasing by 6.6% to \$13.6 billion. This followed a 68% increase in the previous quarter. Exports of this commodity have almost doubled since the September quarter 2009, largely influenced by a boom in prices and increasing demand from Asian countries such as China and Japan.
- In contrast, WA's next largest export commodities, Non-monetary gold and Crude petroleum oils both recorded falls in the September quarter 2010 (-30% and -4% respectively). However, while the export value of gold was marginally higher than that recorded in the September quarter 2009, the value of Crude petroleum oils exports was nearly 50% higher.
- Natural gas exports rose by 63%, to nearly \$2.1 billion, compared with September quarter 2009. This reflects the growing status of WA as one of the world's leading exporters of natural gases, with current resource projects in development set to continue export growth.

VALUE OF EXPORTS FROM WESTERN AUSTRALIA^(a), Top 10 Destinations

Destination	Sep qtr 2010 \$'000	Jun qtr 2010 \$'000	Sep qtr 2009 \$'000
China	10 884 628	10 898 702	6 214 473
Japan	5 232 442	4 434 682	2 985 803
Korea, Republic of	2 587 386	2 286 689	1 378 592
India	1 412 974	1 797 961	2 000 754
Thailand	1 093 914	588 229	507 138
Singapore	996 710	604 091	903 173
Taiwan	794 547	614 688	293 273
United Kingdom	744 736	2 836 225	717 354
United States of America	374 987	434 638	299 768
United Arab Emirates	295 917	275 523	127 665
Total(b)	27 017 936	27 116 552	17 521 306

(a) Free on board (f.o.b.) value

(b) Includes destinations not listed.

Source: ABS data available on request, *International Trade in Goods and Services, Australia* (cat. no. 5368.0).

- In the September quarter 2010, China continued to be Western Australia's main export destination, receiving goods from WA to the value of almost \$10.9 billion. Although marginally lower than in the previous quarter, this value was nearly 75% higher than in the September quarter 2009, a reflection of the growing ties with the expanding Chinese economy.
- After surging to \$2.8 billion in the previous quarter, the value of exports to the United Kingdom in the September quarter 2010 fell back to \$744 million, similar to the value recorded in the same quarter of the previous year. The volatility of quarterly export values is primarily influenced by fluctuations in exports of Non-monetary gold.
- Export values increased between the September quarter 2009 and the September quarter 2010, for all of the Top 10 destinations except India, for which exports decreased by nearly 30%.

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Imports

IMPORTS**MAJOR IMPORT COMMODITIES^{(a)(b)} - Western Australia**

Commodities	Sep qtr 2010 \$'000	Jun qtr 2010 \$'000	Sep qtr 2009 \$'000
Gold, non-monetary	856 089	2 167 192	1 321 348
Crude petroleum oils	755 179	948 720	885 734
Refined petroleum oils	468 795	442 915	354 014
Passenger motor vehicles	413 630	419 839	309 662
Civil engineering plant and equipment	219 686	202 183	80 969
Other specialised industry machinery and equipment	217 316	150 187	129 511
Motor vehicles for the transport of goods	196 112	206 743	129 017
Rubber tyres	104 093	103 036	91 710
Iron or steel tubes and pipes	83 304	85 652	210 800
Total(c)	6 028 380	7 098 626	6 605 262

(a) Care should be taken when comparing with commodities data prior to July 2005. For full details about changes to international trade statistics, users should refer to the Information Paper: Impact of introducing Revision 4 of the Standard International Trade Classification, 2008 (cat.no. 5368.0.55.10).

(b) Customs value.

(c) Includes commodities not listed.

Source: ABS data available on request, *International Trade in Goods and Services, Australia* (cat. no. 5368.0).

- For the September quarter 2010, the decrease in the total value of imports to Western Australia was driven by a 60% decrease in the value of Non-monetary gold imports, following a steep increase in the previous quarter. Non-monetary gold, in the form of leaf, foil, bullion and other fabricated gold products (including granules), is imported for processing before being exported under a different commodity classification.
- Import values for Crude petroleum oils also saw a notable decrease (-20%) in the September quarter 2010, while industrial plant and equipment (of various types) saw significant quarterly increases.
- In the year to September 2010, there was a 9% decrease in the total value of imports to WA. Again, this was primarily driven by large decreases over the year in the import value of Non-monetary gold (-35%) and Crude petroleum oils (-15%).
- This fall in gold import values reflects a large reduction in the value of gold imports from Thailand (down 86% on the previous year). Similarly, the falling values for Crude petroleum oils can be attributed to the declining value of these imports from the United Arab Emirates (-16%) and Indonesia (-34%).

VALUE OF IMPORTS TO WESTERN AUSTRALIA^(a), Top 10 places of origin

Place of Origin	Sep qtr 2010 \$'000	Jun qtr 2010 \$'000	Sep qtr 2009 \$'000
China	931 788	551 447	532 716
United States of America	643 432	572 223	626 947
Singapore	561 972	779 645	343 534
Japan	489 289	492 531	637 393
Malaysia	408 683	533 058	280 481
United Arab Emirates	377 155	384 340	417 052
Indonesia	357 053	356 028	313 985
Thailand	332 398	1 342 490	1 326 396
Germany	209 071	216 682	277 664
Papua New Guinea	208 672	286 012	42 634
Total(b)	6 028 380	7 098 626	6 605 262

(a) Customs value.

(b) Includes countries not listed.

Source: ABS data available on request, *International Trade in Goods and Services, Australia* (cat. no. 5368.0).

- In the September quarter 2010, WA received its largest value (over \$930 million) of imports from China, followed by the United States of America and Singapore.
- The value of imports from China increased by 69% in the September quarter 2010, and were 75% higher than in the same quarter of the previous year. This reflects increasing volumes of imported consumer goods, such as electronics and clothing.
- After increasing to \$1.3 billion in the June quarter 2010, imports from Thailand were only a quarter of the value recorded in the September quarter 2009.
- In contrast, imports from other South-East Asian countries, including Malaysia and Singapore, along with Papua New Guinea, were considerably higher in the September quarter 2010 than in the corresponding quarter of the previous year.

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INVESTMENT AND FINANCE

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 Private New Capital Expenditure
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Private New Capital Expenditure

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PRIVATE NEW CAPITAL EXPENDITURE

SEPTEMBER KEY FIGURES, Western Australia

	Sep qtr 2010 \$m	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Trend estimates(a)			
Total new capital expenditure	8 849	5.5	13.0
Buildings & structures	6 690	8.8	26.8
Equipment, plant & machinery	2 115	-5.6	-17.6
Seasonally adjusted estimates(a)			
Total new capital expenditure	9 089	10.4	19.9
Buildings & structures	6 928	13.6	35.6
Equipment, plant & machinery	2 162	1.3	-12.7

(a) In chain volume measures

Source: *Private New Capital Expenditure and Expected Expenditure, Australia* (cat. no. 5625.0).

- In September quarter 2010, total new capital expenditure in WA was 13% higher in trend terms, and 20% higher in seasonally adjusted terms, than in the corresponding quarter of the previous year. The increase was due to a large rise in new capital expenditure on Building and Structures, partially offset by a decrease in expenditure on Equipment, plant and machinery.

Private New Capital Expenditure, Chain Volume Measures



- After decreasing for four quarters, private new capital expenditure turned around in the June quarter 2010 and then reached a new high of \$8.8 billion (trend) in the September quarter 2010.

PRIVATE NEW CAPITAL EXPENDITURE, by Industry - Current Prices, Western Australia

Original	Sep qtr 2010 \$m	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Mining	6 445	5.5	26.4
Manufacturing	^a 730	1.1	78.5
Total(a)	8 465	0.8	19.7

^aestimate has a relative standard error of 10% to less than 25% and should be used with caution.

(a) Includes other industries

Source: *Private New Capital Expenditure and Expected Expenditure, Australia* (cat. no. 5625.0).

- In the September quarter 2010, new capital expenditure on mining increased by 5.5% to \$6.4 billion (original data), the largest quarterly expenditure since December 2008 (\$6.7 billion).
- While the estimates for manufacturing should be treated with caution due to high standard errors, the original data suggest a considerable increase in capital expenditure on manufacturing over the year to September 2010.

This link takes you to time series spreadsheets from *Private New Capital Expenditure and Expected Expenditure, Australia, Sep 2010* (cat. no. 5625.0).

Tables 5B and 5C contain Actual Expenditure by Type of Asset and State, Chain volume measures (Seasonally Adjusted and Trend). Tables 10A and 10B contain Actual and Expected Capital Expenditure by Asset and Industry for Western Australia (Current Prices).

Lending and Housing Finance Commitments

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LENDING FINANCE COMMITMENTS

NOVEMBER KEY FIGURES, Western Australia

Original Data(a)	Nov 2010 \$m	Oct 2010 to Nov 2010 % change	Nov 2009 to Nov 2010 % change
Housing finance for owner occupation	1 738.0	12.9	-20.0
Personal finance	1 077.9	8.3	-0.1
Commercial finance	2 970.1	-7.8	-8.7
Lease finance	22.6	12.7	28.1

Source: *Lending Finance, Australia* (cat. no. 5671.0); *Housing Finance, Australia* (cat. no. 5609.0).

(a) Personal, Commercial and Lease finance commitments data are only available in original terms. Housing finance commitments data are also available in trend and seasonally adjusted terms (see below).

- In original data terms, the value of lending commitments in the month of November rose across all types of finance except Commercial finance, which fell by almost 8%.
- Compared with November of the previous year, Housing and Personal finance commitments that were about 20% lower in November 2010, while Lease Finance commitments were around 28% higher.

This link takes you to time series spreadsheets from *Lending Finance, Australia, November 2010* (cat. no. 5609.0). Data for Western Australia can be found in Table 23: Commercial Finance Commitments; Table 35: Lease Finance Commitments; and Table 57: Personal Finance Commitments.

HOUSING FINANCE COMMITMENTS

NOVEMBER KEY FIGURES, Western Australia(a)

Estimate	Number of dwelling commitments(b)			Value of dwelling commitments(b)		
	November 2010	% change from		November 2010	% change from	
		October 2010	November 2009		October 2010	November 2009
	no.	%	%	\$m	%	%
Trend	5 650	1.3	-20.8	1 593.4	1.4	-23.7
Seasonally adjusted	5 733	2.2	-19.6	1 630.1	4.0	-23.3

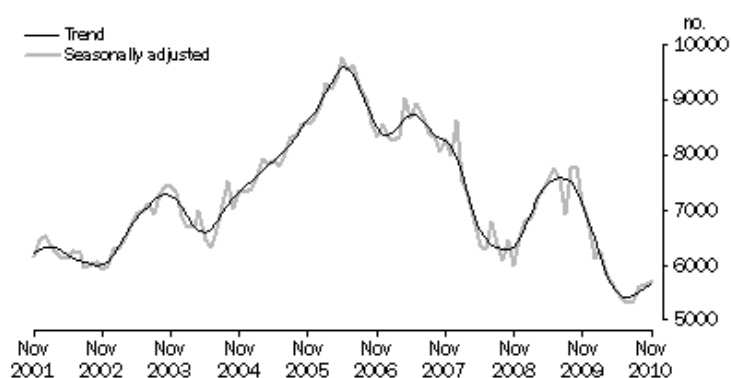
(a) Dwelling commitment statistics presented in this table are for owner occupied dwellings.

(b) Excludes alterations and additions. Includes re-financing.

Source: *Housing Finance, Australia* (cat. no. 5609.0).

- In November 2010, the number of owner occupied housing commitments increased for the fourth consecutive month, giving a rise of 1.3% in trend terms.
- In seasonally adjusted terms, the number of owner occupied commitments increased by 2.2% while the total value of commitments increased by 4.0%. However, these estimates were around 23% lower than in November 2009.

Number of Dwelling Commitments, Owner Occupied Housing



Source: Housing Finance, Australia, cat. no. 5609.0.

- Over the last 10 years, there has been considerable volatility in the number of finance commitments for owner-occupied housing.
- After peaking at 9,600 (trend) in May 2006, the number of commitments followed a downward trend, dropping below 6,300 in September 2008.
- Coinciding with falling interest rates and increased government subsidies, the number of commitments began to rise again in October 2008, climbing to almost 7,600 by July 2009.
- The number of commitments then fell by around 1,900 twelve months later although small increases over the four months to November 2010 may indicate the beginning of a new upward trend.

HOUSING FINANCE COMMITMENTS FOR OWNER OCCUPATION^{(a)(b)}, First Home Buyers

Reference period	Number of commitments no.	Value of commitments \$m	Average loan size \$'000
2008-2009(c)	20 782	5 861.3	282.0
2009-2010(c)	19 327	5 667.0	293.2
2009November	2 088	628.0	300.8
December	1 841	550.3	298.9
2010January	1 259	376.1	298.7
February	1 172	342.7	292.4
March	1 162	333.5	287.0
April	889	255.9	287.8
May	955	265.2	277.7
June	967	270.2	279.4
July	798	223.5	280.1
August	924	259.2	280.5
September	945	257.9	272.9
October	987	274.0	277.6
November	1 126	302.7	268.8

(a) Original data for Western Australia.

(b) Excludes alterations and additions. Includes re-financing.

(c) Year ending June.

Source: Housing Finance, Australia (cat. no. 5609.0).

- At the state level, the breakdown of dwelling finance commitments by first and non-first home buyers is available only in original data terms.
- In November 2010, the number of first home buyer commitments rose by 14% according to the original data. This followed three previous monthly rises after commitments fell below 800 in July for the first time in ten years. Despite this turnaround, the number of commitments in November 2010 was just above half of those recorded in November 2009, when the First Home Owners' Boost was still in operation.
- In November 2010, the average loan size for first home buyers in Perth fell 3.2% to \$268,800,

the lowest value since October 2008.

- In the 12 months to November, the average loan size decreased by 11%, reflecting a downward trend in the median house price.

HOUSING FINANCE COMMITMENTS FOR OWNER OCCUPATION^{(a)(b)}, Non-First Home Buyers

Reference period	Number of commitments no.	Value of commitments \$m	Average loan size \$'000
2008-2009(c)	61 093	15 984.7	261.6
2009-2010(c)	59 632	17 188.7	288.2
2009November	5 286	1 545.1	292.3
December	5 294	1 518.3	286.8
2010January	3 943	1 176.6	298.4
February	4 735	1 374.6	290.3
March	5 195	1 518.5	292.3
April	4 418	1 293.1	292.7
May	4 642	1 321.6	284.7
June	4 652	1 340.7	288.2
July	4 536	1 301.4	286.9
August	4 582	1 313.7	286.7
September	4 721	1 343.6	284.6
October	4 522	1 264.8	279.7
November	5 020	1 435.2	285.9

(a) Original data for Western Australia.

(b) Excludes alterations and additions. Includes re-financing.

(c) Year ending June.

Source: *Housing Finance, Australia* (cat. no. 5609.0).

- In November 2010, the number of dwelling finance commitments for non-first home buyers was 11% higher than the October figure. Despite this recent rise, the November figure was still 5% lower than in November of the previous year.
- The average loan size in November 2010 for this group of borrowers was \$285,900, a 2.2% increase from the previous month.

This link takes you to time series spreadsheets from *Housing Finance, Australia, November 2010* (cat. no. 5609.0). Tables 5 - 8 and Tables 9B-10C contain a range of housing finance commitments data by state.

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Construction

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CONSTRUCTION

This section contains the following subsection :

Building Approvals

Value of Building Work Done

Number of Dwelling Units and Stage of Production

Building Approvals

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BUILDING APPROVALS

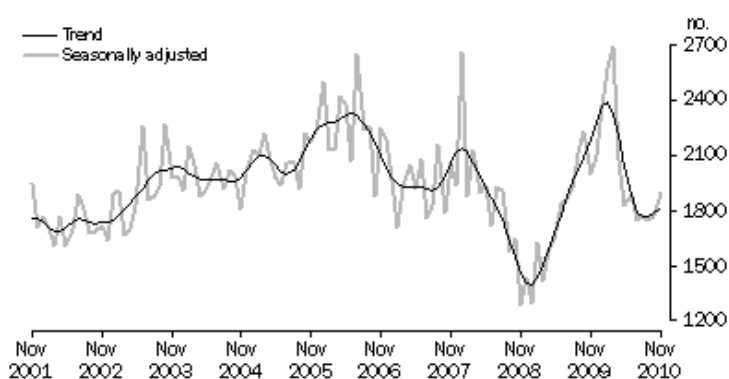
NOVEMBER KEY FIGURES, Western Australia

	Nov 2010 no.	Oct 2010 no.	Nov 2009 no.
Dwelling units approved			
Trend estimates	1 806	1 783	2 186
Seasonally adjusted estimates	1 898	1 772	1 996

Source: *Building Approvals, Australia* (cat. no. 8731.0).

- In November 2010, the trend estimate for dwelling units approved rose slightly in WA for the third consecutive month but was 17% lower than in November 2009. This compared with a 10% fall nationally over the same 12 month period.
- WA was one of only two states to record an increase in trend terms (1.3%) from the previous month, while nationally the trend estimate fell 0.4%.
- For private sector housing, there was a small decrease (-1.1%) in the monthly trend estimate. This was the tenth consecutive monthly fall in private sector approvals in WA, which mirrored the Australian trend.

Total Dwelling Units Approved



Source: *Building Approvals, Australia*, cat. no. 8731.0.

- After years of relatively small movement in the monthly trend estimate, the number of dwelling units approved in WA fell steeply through 2008, dropping by a third to a low of 1,400 in January 2009. Driven by falling interest rates, increased government subsidies and social housing initiatives, introduced in response to the global financial downturn, the number of dwelling approvals then made a rapid recovery through the 2009 calendar year.
- After peaking in early 2010, approvals declined again as the residential building market reacted to rising interest rates and the end of the First Home Owner's Boost. Although there were signs of a recovery in the last three months, building approvals in November 2010 remained lower, in trend terms, than at any time in the six years prior to the GFC.

This link takes you to time series spreadsheets from *Building Approvals, Australia, Nov 2010* (cat. no. 8731.0). Table 05 contains Number of Dwellings Approved by Sector for Western Australia.

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Value of Building Work Done

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VALUE OF BUILDING WORK DONE

JUNE KEY FIGURES, Western Australia

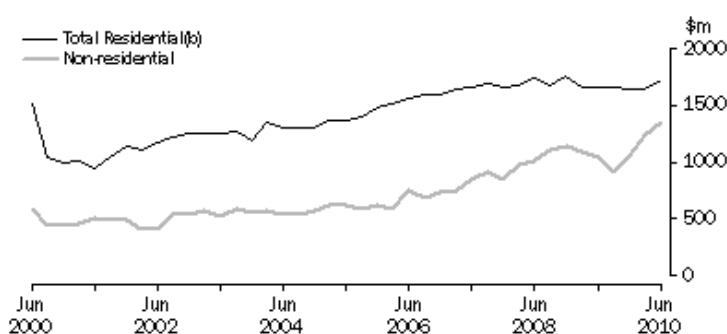
Seasonally adjusted	Jun qtr 2010 \$m	Mar qtr 2010 to Jun qtr 2010 % change	Jun qtr 2009 to Jun qtr 2010 % change
Value of work done(a)			
New residential building	1 550.9	6.9	2.0
Alterations and additions to residential building	177.2	-6.5	24.9
Non-residential building	1 360.4	10.1	31.5
Total value of work done	3 088.5	7.4	14.5

(a) Chain volume measures, reference year 2007-08.

Source: *Building Activity, Australia* (cat. no. 8752.0).

- The seasonally adjusted value of building work done in the June quarter 2010 was estimated to be approximately \$3.1 billion, an increase of 7.4% from the previous quarter and nearly 15% higher than for the same quarter of the previous year.
- The value of non-residential building has recorded strong growth over the past three quarters and was again the greatest contributor to the June quarter increase (up 10% to almost \$1.3 billion).
- The value of new residential building reversed falls over the past year with a 6.9% increase in the June quarter 2010, its largest quarterly increase for more than six years.

Value of Work Done(a): Seasonally Adjusted



(a) Chain volume measures, reference year 2007-2008

(b) Includes new residential building as well as alterations and additions

Source: *Building Activity, Australia* (cat. no. 8752.0)

- The value of non-residential building has more than doubled in the last five years in seasonally adjusted terms, despite the global economic downturn. This was initially reflected in a steep fall in non-residential building followed by a rapid recovery from late 2009.

- In contrast, the quarterly value of residential building work has increased at a much slower rate over the same period, with growth remaining fairly flat since late 2008.

This link takes you to the latest time series spreadsheets from *Building Activity, Australia, Jun 2010* (cat. no. 8752.0). Tables 2, 4, 9-11, 17 contain Value of Building Work Done for WA.

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Number of Dwelling Units and Stage of Production

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NUMBER OF DWELLING UNITS AND STAGE OF PRODUCTION

JUNE KEY FIGURES, Western Australia

Original	Jun qtr 2010 No.	Mar qtr 2010 to Jun qtr 2010 % change	Jun qtr 2009 to Jun qtr 2010 % change
Total Residential Building(a)			
Dwellings commenced	6 740	-5.9	53.5
Dwellings under construction	19 131	7.1	14.7
Dwellings completed	5 449	5.7	-13.9

(a) Includes total alterations and additions, refurbishments and conversions

Source: *Building Activity, Australia* (cat. no. 8752.0).

- In the June quarter 2010, there was a fall in the number of residential dwellings commenced (-5.9%) but increases in the number of dwellings under construction (7.1%) and completed (5.7%).
- The increased number of dwelling commencements compared to the June quarter 2009 may be reflective of the building industry catching up with demand, following a 'saturation' of the market in 2009 when falling interest rates and increased government subsidies resulted in record numbers of building approvals.

This link takes you to the latest time series spreadsheets from *Building Activity, Australia, Jun 2010* (cat. no. 8752.0). Tables 34-39 contain Number of Dwelling Units Commenced and Completed. Tables 76 and 77 contain Number of Dwelling Units Under Construction.

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Engineering Construction Activity

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ENGINEERING CONSTRUCTION ACTIVITY

JUNE KEY FIGURES, Western Australia

	Jun qtr 2010 \$m	Mar qtr 2009 to Jun qtr 2010 % change	Jun qtr 2009 to Jun qtr 2010 % change
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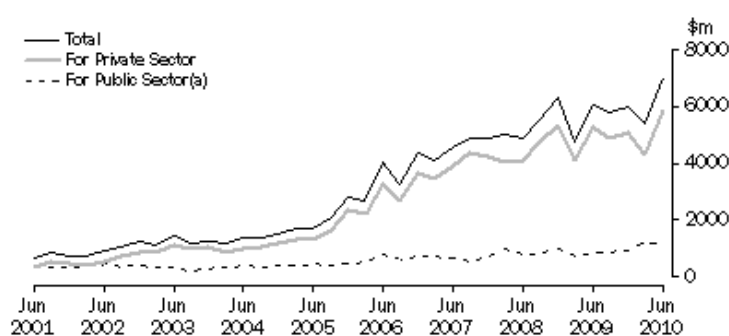
Value of Work Done(a)			
Trend	6 894.8	7.0	17.1
Seasonally Adjusted	7 225.2	15.2	16.0

(a) Chain volume measures, reference year 2007-08

Source: *Engineering Construction Activity, Australia* (cat. no. 8762.0).

- In trend terms, the value of engineering construction work in WA was \$6.9 billion for the June quarter 2010. This was 7% higher than the value for the previous quarter and more than 17% higher than the value for the June quarter 2009.
- In seasonally adjusted terms, the value of engineering construction work, in the June quarter 2010 grew by over 15% to \$7.2 billion. This value was 16% higher than that recorded for the June quarter 2009.

Value of Work Done(a), Western Australia: Original



(a) Data for the period September 2008 to March 2010 should be treated with caution due to high standard errors in some quarters - see source data for more detail.

Source: *Engineering Construction Activity, Australia*, cat. no. 8762.0.

- Over the last decade, much of the increase in the value of engineering construction in the state has been driven by work undertaken for the private sector. In original terms, the private sector value has risen substantially, from around \$282 million in June quarter 2001 to \$5.9 billion in June quarter 2010.

This link takes you to time series spreadsheets from *Engineering Construction Activity, Australia, June 2010* (cat no. 8762.0). Tables 24 - 26 contain Western Australian data on Value of Work Commenced/Done/Yet to Be Done by Sector.

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Mining and Energy

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MINING AND ENERGY

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- Mineral Production
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Mineral and Petroleum Exploration Expenditure

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MINERAL AND PETROLEUM EXPLORATION EXPENDITURE

SEPTEMBER KEY FIGURES, Western Australia

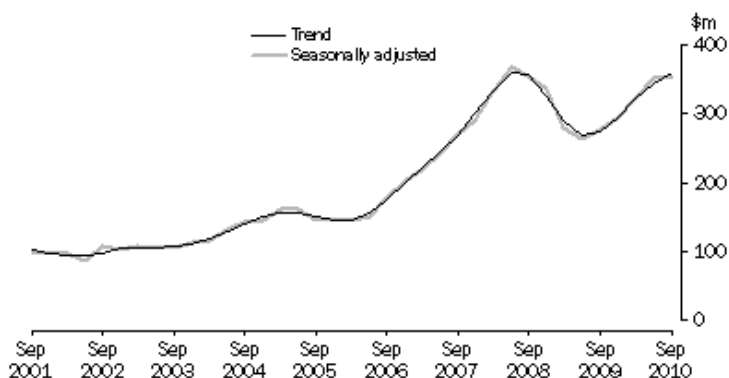
Mineral Exploration Expenditure (a)	Sep qtr 2010 \$m	Jun qtr 2010 to Sep qtr 2010 % change	Sep qtr 2009 to Sep qtr 2010 % change
Trend estimates	361.9	5.0	32.0
Seasonally adjusted estimates	355.7	0.9	28.7

(a) Excluding petroleum

Source: *Mineral and Petroleum Exploration, Australia* (cat. no. 8412.0).

- In the September quarter 2010, total expenditure on minerals exploration increased for the fifth consecutive quarter, climbing above \$360 million in trend terms. This expenditure value surpasses the previous peak level reached two years earlier, before the global financial crisis saw expenditure fall by 25% in late 2008 and early 2009.

Mineral Exploration Expenditure, Total Minerals



Source: *Mineral and Petroleum Exploration, Australia*, cat. no. 8412.0.

- Exploration expenditure in WA increased (in original terms) across a wide range of minerals between the September quarter 2009 and the September quarter 2010. The most notable annual increases were for Gold (up 49%) and Nickel, cobalt (up 46%).
- In the September quarter 2010, petroleum exploration expenditure was nearly 14% lower than in the previous quarter but only marginally lower than in the corresponding quarter of 2009.

MINERAL AND PETROLEUM EXPENDITURE(a), By selected minerals: Original - Western Australia

Copper \$m	Silver, lead, zinc \$m	Nickel, cobalt \$m	Gold \$m	Iron ore \$m	Total minerals(b) \$m	Total petroleum \$m
---------------	---------------------------	-----------------------	-------------	-----------------	--------------------------	------------------------

2009							
September	7.9	4.4	46.1	70.7	134.2	298.9	603.9
2010							
June	15.4	7.2	54.3	109.0	142.3	366.3	692.3
September	19.2	7.2	67.4	105.3	136.2	384.6	597.1

(a) Includes expenditure on Western Australia leases in the Zone of Cooperation Area B.

(b) Includes minerals not separately listed in the table.

Source: *Mineral and Petroleum Exploration, Australia* (cat. no. 8412.0).

This link takes you to time series spreadsheets from *Mineral and Petroleum Exploration, Australia, Sep 2010* (cat. no. 8412.0). Tables 4 & 5 contain mineral exploration expenditure by state and mineral sought. Table 7 contains petroleum exploration expenditure by region.

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Mineral Production

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MINERAL PRODUCTION

MINERAL PRODUCTION, Selected minerals^(a): Original - Western Australia

Period		Diamonds '000 carats	Iron ore ^(b) '000 tonnes	Bauxite '000 tonnes
2009				
	September	2 333	103 517	10 642
2010				
	June	2 669	101 703	10 655
	September	2 471	106 146	10 801

(a) Latest figures are preliminary and subject to revision.

(b) For use in iron and steel making.

Sources: ABARE-BRS, *Australian Mineral Statistics*.

- In original terms, the quantity of diamond production decreased by 7% in the September quarter 2010, but was 6% higher than in the September quarter 2009.
- The quantity of iron ore produced in the September quarter 2010 was 2.5% higher than in the corresponding quarter of 2009.
- Production of bauxite has remained fairly steady in recent times, with the September quarter 2010 production level only 1.5% higher than one year before.

Statistics on mineral production for WA can be found on the latest releases page of the ABARE-BRS website *Australian Mineral Statistics, September Quarter 2010*.

Other resource statistics can be found on the *Department of Mines and Petroleum* website.

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Energy Production

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ENERGY PRODUCTION

Energy production figures for Western Australia, generally provided in this section, are currently not available from regular sources.

Crude oil and Natural gas data have not been available since March quarter 2010. The *Department of Resources, Energy and Tourism* and *ABARE-BRS* have conducted a joint review identifying issues affecting the coverage and quality of Australia's petroleum data. The data will be updated once these issues are resolved.

The value for total electricity generation is unavailable due to the discontinuation of the ABS Survey of Electricity Generation and Gas. The data were previously published in *Manufacturing Production, Australia* (cat. no. 8301.0.55.001), the final issue of which related to the June quarter 2010.

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TOURISM

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Short-term Visitor Arrivals on Holiday

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SHORT-TERM VISITOR ARRIVALS ON HOLIDAY

OVERSEAS VISITOR ARRIVALS ON HOLIDAY, Western Australia - Top 20 Places of Origin

	2009-2010	Sep qtr 2010	Jun qtr 2010	Mar qtr 2010	Dec qtr 2009	Sep qtr 2009
Place of origin	no.	no.	no.	no.	no.	no.
VISITOR ARRIVALS(a)						
United Kingdom(b)	45 055	6004	5 676	16 517	18 674	7 188
Singapore	42 626	8909	12 444	8 046	13 925	8 211
Malaysia	30 247	9323	8 440	5 749	8 699	7 359
Japan	13 670	4742	1 713	4 035	3 779	4 143
New Zealand	11 770	3556	2 938	1 943	3 126	3 763
Germany	10 097	2202	1 546	2 826	3 735	1 990
Indonesia	9 627	3327	2 318	1 709	2 762	2 838
United States of America	5 962	1227	1 245	1 347	1 990	1 380
Hong Kong(c)	5 320	1488	1 110	1 486	1 404	1 320
Thailand	5 257	693	1 107	1 953	1 397	800
South Africa	5 181	788	1 192	1 039	1 801	1 149
Switzerland	5 094	902	543	1 463	2 161	927
France	4 456	1251	651	1 363	1 343	1 099

Ireland	4 221	760	769	1 263	1 291	898
Italy	3 869	1086	433	790	1 345	1 301
China(d)	3 187	1062	566	1 042	752	827
South Korea	3 087	805	497	973	881	736
Netherlands	2 855	645	485	715	924	731
Taiwan	2 676	796	626	793	543	714
Canada	2 519	425	432	745	929	413
Total(e)	238 768	54 008	48 095	61 085	77 912	51 676

(a) Overseas visitors arriving by air on holiday, whose intended stay in Australia is less than 12 months (Original data).

(b) Includes Channel Islands and Isle of Man.

(c) Special Administrative Region of China.

(d) Excludes Special Administrative Regions and Taiwan Province.

(e) Total includes countries not listed.

Source: *Overseas Arrivals and Departures, Australia* (cat. no. 3401.0).

- Almost 238,800 overseas visitors arrived on holiday in WA in the year ending June 2010. The top five countries of origin were the United Kingdom (19%), Singapore (18%), Malaysia (13%), Japan (6%) and New Zealand (5%). A further 4% of overseas visitors were from Germany and Indonesia.
- Just over 54,000 tourists arrived in the September quarter 2010, an increase of 4.5% from the same quarter of the previous year. The rise was driven mainly by increasing numbers of visitors from North East and South East Asia. Malaysian tourists showed the largest increase, with 27% more tourists from that country than in the same quarter of the previous year.
- In the September quarter 2010, South East Asian countries, most notably Malaysia (17%) and Singapore (16%), accounted for 42% of all visitors.
- The September quarter saw a decline in the numbers visiting from Europe, Africa and the Americas. Visitors from the United Kingdom accounted for most of this decline, down 16% compared with the September quarter 2009.

This link will take you to the *Summary of Statistical Indicators (Economic)* data cube, which includes a broader range of overseas arrivals and departures data.

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Short-term Resident Departures on Holiday

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SHORT-TERM RESIDENT DEPARTURES ON HOLIDAY

RESIDENT DEPARTURES ON HOLIDAY, Western Australia - Top 20 Destinations

Destination	2009-2010 no.	Sep qtr 2010 no.	Jun qtr 2010 no.	Mar qtr 2010 no.	Dec qtr 2009 no.	Sep qtr 2009 no.
RESIDENT DEPARTURES(a)						
Indonesia	259 737	84 785	72 005	61 016	64 668	62 048
Thailand	60 241	18 007	15 761	12 913	14 625	16 942
Malaysia	40 991	13 224	9 019	9 424	11 847	10 701
Singapore	37 674	9 752	8 171	7 677	10 581	11 245
United Kingdom(b)	34 986	12 102	13 299	3 624	7 239	10 824
New Zealand	31 857	9 080	4 367	9 319	8 252	9 919
United States of America	25 021	9 484	6 443	5 155	6 418	7 005
Hong Kong(c)	11 803	2 456	2 193	3 005	3 509	3 096
Italy	9 983	4 015	4 015	649	1 303	4 016
Japan	8 078	1 007	866	3 991	2 127	1 094
France	7 817	3 915	2 398	887	1 194	3 338

China(d)	7 475	2 664	1 918	1363	2 250	1 944
South Africa	6 477	1 518	1 463	1 746	1 823	1 445
India	6 252	805	657	1690	2 743	1 162
Canada	5 369	1 337	1 558	708	1 112	1 991
Philippines	4 980	1 500	1 417	1 289	1 178	1 096
Fiji	3 949	1 534	1 147	631	1 146	1 025
Germany	2 978	1 532	1 176	237	783	782
Greece	2 751	1 357	1 160	55	203	1 333
Spain	2 277	876	1 089	213	239	736
Total(e)	624 571	198 074	165 407	136 043	157 035	166 086

(a) Residents departing by air on holiday, whose intended stay overseas is less than 12 months (Original data).

(b) Includes Channel Islands and Isle of Man.

(c) Special Administrative Region of China.

(d) Excludes Special Administrative Regions and Taiwan Province.

(e) Total includes countries not listed.

Source: ABS data available on request, *Overseas Arrivals and Departures, Australia* (cat. no. 3401.0).

- Of the 625,000 Western Australian residents holidaying abroad in 2009-10, about two-thirds travelled to nearby South-East Asian countries. The top destinations were Indonesia (42%), Thailand (10%), Malaysia (7%) and Singapore (6%). The United Kingdom and New Zealand were also popular destinations, each accounting for between 5% and 6% of holiday departures overseas.
- In the September quarter 2010, around 198,000 residents left WA for overseas holidays, 19% more than in the same quarter of 2009.
- In the year to September 2010, Oceania was the only region to record a decline as a favoured holiday destination, largely due to less departures to New Zealand.
- The popularity of Indonesia as a holiday destination among Western Australians continued to rise, with about 84,800 resident departures to that country in the September quarter 2010. These accounted for 43% of all resident departures. Thailand was the second most popular destination, attracting just over 9% of all WA residents holidaying overseas.

This link will take you to the *Summary of Statistical Indicators (Economic)* data cube, which includes a broader range of overseas arrivals and departures data.

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Environment

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ENVIRONMENT

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Agricultural Water Use

AGRICULTURAL WATER USE

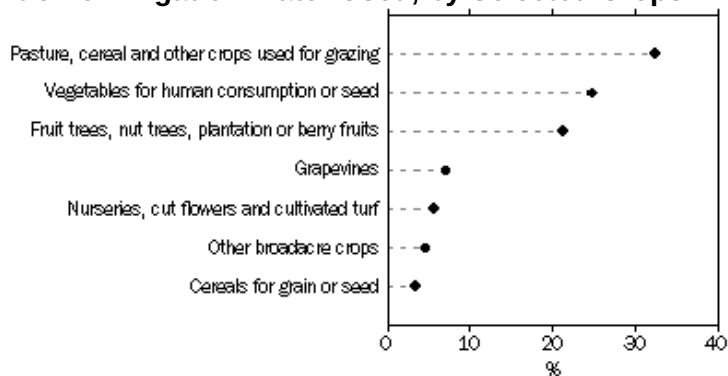
AGRICULTURAL WATER USE, Western Australia

	Unit	2008-09	2007-08	2006-07
Agricultural businesses				
Irrigating	no.	2 865	2 720	2 935
Total	no.	12 658	13 084	13 608
Area of agricultural holding				
Irrigated	ha	47 804	63 364	53 268
Total	ha	93 645 885	93 034 706	96 741 958
Water use				
Irrigation	ML	226 085	284 878	293 186
Other agricultural uses	ML	92 310	85 026	118 806
Total water use	ML	318 395	369 904	411 992
Application rate	ML/ha	4.7	4.5	5.5

Source: *Water Use on Australian Farms* (cat. no. 4618.0)

- WA's agricultural water use fell by 51.5 gigalitres (down 14%) to 318.4 gigalitres in 2008-09. Nationally, agricultural water use rose by 4% or 7,286 gigalitres, the first increase since 2005-06. Agricultural water use remains below 2005-06 levels in all states, particularly NSW (down 56%) and Victoria (down 49%).
- Over one-fifth (23%) of WA's 12,658 agricultural businesses undertook irrigation in 2008-09. However, the area irrigated by these businesses represented less than 1% of the total area of agricultural holdings in the state.
- In 2008-09, the volume of water applied for irrigation decreased by 58,800 megalitres (ML) (21%). However, there was a substantial fall in the area of land irrigated in WA over this period (down 15,600 ha). This decrease resulted in the application rate in WA rising to 4.7 ML/ha, the highest in Australia.

Proportion of Irrigation Water Used, by Selected Crops - 2008-09



Source: *Water Use on Australian Farms*, cat. no. 4618.0

- In 2008-09, the major use of irrigated water in WA was for Pasture, cereal and other crops used for grazing, accounting for 32% of irrigation water applied in the state. The next major uses of water were for Vegetables for human consumption or seed (25%) and Fruit trees, nut trees, plantation and berry fruits (21%).

The following link takes you to the Downloads page for *Water Use on Australian Farms, 2008-09* (cat. no. 4618.0). The publication tables data cube provides statistics by state and territory on agricultural water use.

Household Waste Management

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HOUSEHOLD WASTE MANAGEMENT

HOUSEHOLD WASTE MANAGEMENT(a), Western Australia

	2009 '000	2009 %	2006 %	2003 %
Recycled waste(b)	808.3	95.9	96.2	91.7
Re-used waste(c)	736.3	87.3	87.3	83.3
Neither recycled or re-used waste	16.0	1.9	*0.9	3.4

*Estimate has a standard error of 25% to 50% and should be used with caution.

(a) Refers to number of households that have recycled or re-used household waste in the 12 months prior to the survey.

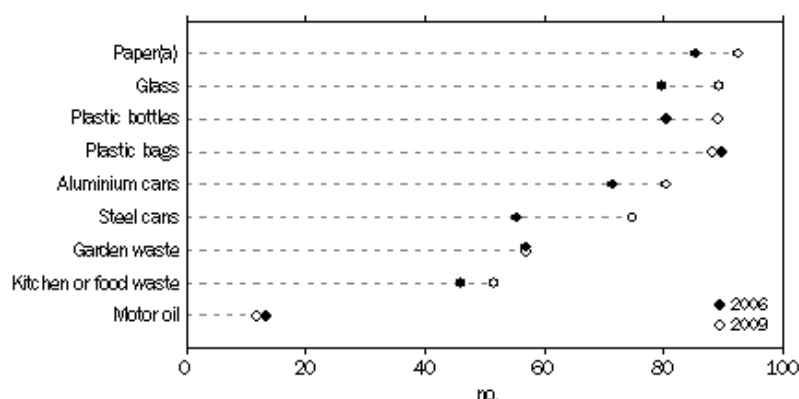
(b) Households that recycled at least one surveyed waste item.

(c) Households that re-used at least one surveyed waste item.

Source: *Environmental Issues: Household Waste Management and Transport Use* (cat no. 4602.0.55.002)

- Of the estimated 843,000 Western Australian households in 2009, almost 96% had participated in some form of recycling in the previous 12 months, similar to the proportion in 2006. Likewise, the proportion of households re-using waste remained at just over 87% between 2006 and 2009. Less than 2% of households in WA did not re-use or recycle any household waste items in 2009.

Type of Household Waste Recycled or Re-used, Selected Items



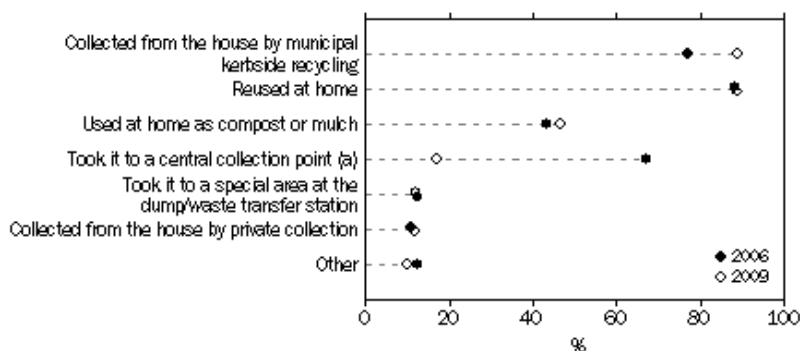
(a) Includes paper, cardboard and newspapers.

Source: *Environmental Issues: Household Waste Management and Transport Use*, cat no. 4602.0.55.002

- In 2009, the most recycled and/or reused items among households in WA were Paper, cardboard and newspapers (92%), followed by Glass (89%), Plastic bottles (89%), and Plastic bags (83%). Western Australian households were recycling most surveyed items at a greater rate than in previous years. Steel cans showed the greatest increase, with 74% of households recycling or re-using these items compared with 56% in 2006.
- The most common reason given for not recycling a waste item was not using any or enough materials to warrant recycling or not appropriate (96%). Almost one in five (17%) Western

Australian households reported they had not recycled an item because they were not interested or it was too much effort.

Ways in which Households Recycle Waste



(a) Excluding dump/waste transfer station

Source: *Environmental Issues: Waste Management and Transport Use, Mar 2009*, cat. no. 4602.0.55.002

- Western Australians were less likely to take their household waste to a central collection point, other than a dump or waste transfer station, in 2009 (17%) than they were in 2006 (67%). This can be partly attributed to the increased use of municipal kerbside recycling, which rose from 77% to 89% between 2006 and 2009.

This link take you to the Downloads page for *Environmental Issues: Waste Management and Transport Use, Mar 2009* (cat. no. 4602.0.55.002) where you can access additional statistics on this topic, including individual state/territory and national data.

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The Indian Ocean Frontier: Western Australia's Trade with India and the Indian Ocean Rim (Feature Article)

This document was added or updated on 20/01/2011.

THE INDIAN OCEAN FRONTIER: WESTERN AUSTRALIA'S TRADE WITH INDIA AND THE INDIAN OCEAN RIM

INTRODUCTION

According to the Australian Strategic Policy Institute, the Indian Ocean region is becoming the focus of increasing strategic and political attention for a variety of geopolitical and economic reasons, with merchandise trade and investment opportunities in the region expected to continue increasingly into the future. Indicative of this growing focus on the Indian Ocean Rim (IOR) is that, in 2011 and 2012, India will Chair the *Indian Ocean Rim Association for Regional Cooperation* (IOR-ARC), with Australia as Vice Chair. Australia will take over the position of Chair for 2013 and 2014.

The IOR-ARC is a regional forum of countries in the Indian Ocean region and currently has eighteen

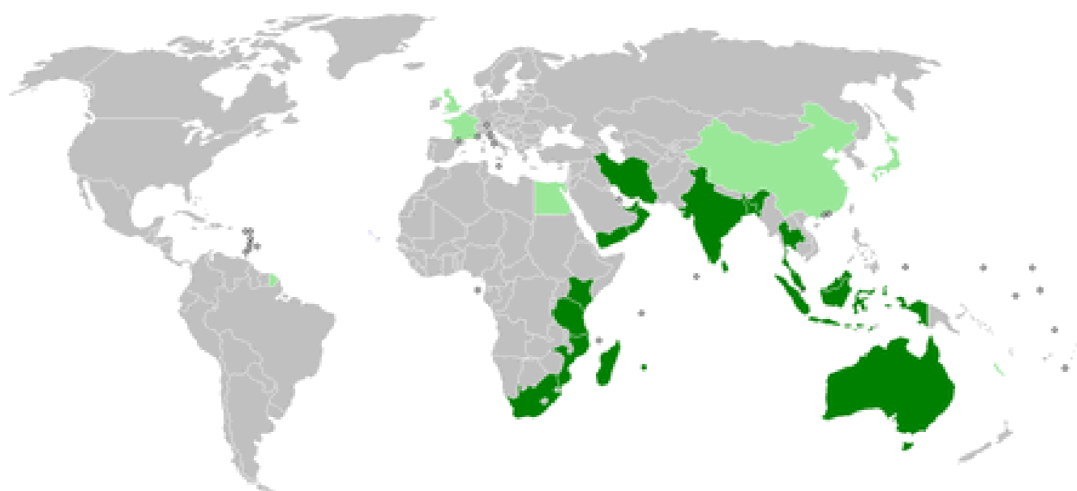
member states. These range from developed states such as Australia and Singapore to some of the least developed such as Mozambique and Yemen. The objective of the organisation is to promote regional economic cooperation through liberalising trade and investment flows; developing a common position on global issues; and strengthening links with industry, academia, and training and specialised institutions within the region.

Composition of the IOR-ARC

The eighteen member states include Australia, Bangladesh, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Oman, Singapore, South Africa, Sri Lanka, Tanzania, Thailand, United Arab Emirates and Yemen.

Throughout the following analysis, the IOR-ARC grouping referred to includes India but excludes Australia. While Australia is geographically part of the IOR region, the exclusion of this country from the grouped data allows for a more meaningful comparison of its trade and investment relationship with the other IOR-ARC countries.

The Indian Ocean Rim



<input type="checkbox"/>	IOR-ARC member countries
<input type="checkbox"/>	IOR-ARC dialogue partners

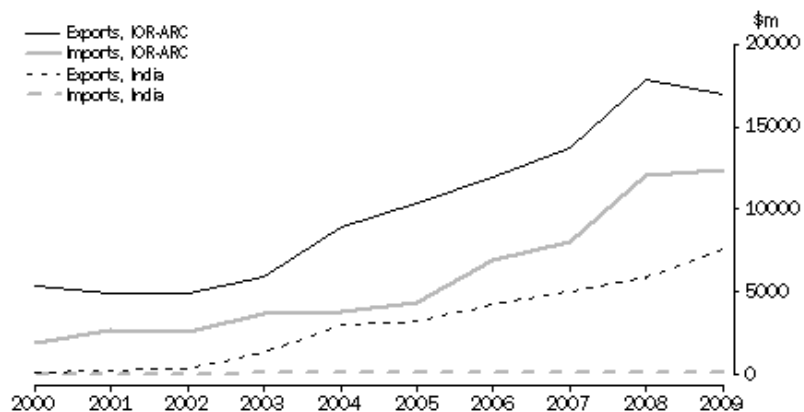
Source: Aris Katsaris, Wikimedia

India is Australia's fastest growing bilateral trade partner and is widely regarded as the next big emerging economy after China, powered by growing middle class demand and ongoing economic reforms. Regional cooperation is particularly important for Western Australia (WA) as the Indian Ocean is a key transit zone for export of mineral and energy resources. This article examines WA's and Australia's trade and investment with India and IOR-ARC from 2000 to 2009.

WESTERN AUSTRALIA'S MERCHANDISE TRADE WITH IOR-ARC

Over the last decade, WA's trade with IOR-ARC has grown considerably. Between 2000 and 2009, two-way merchandise trade more than quadrupled, from around \$7 billion in 2000 to \$29 billion in 2009. This comprised exports from WA to IOR-ARC, which increased from \$5 billion to \$17 billion, and imports from IOR-ARC, which rose from \$2 billion to \$12 billion over the same period.

Western Australia's Trade with India and IOR-ARC



Source: ABS data available on request, *International Trade in Goods and Services, Australia*, cat no. 5368.0

In each of the years between 2000 and 2009, WA enjoyed a trade surplus with IOR-ARC, which ranged from around \$2 billion in 2001 to \$6 billion in 2005. A factor behind the surpluses has been a particularly strong trade relationship with India. Although merchandise exports to India have increased substantially, with India overtaking Singapore as the main IOR-ARC export destination since 2004, imports to WA from India have remained low in comparison, reaching \$125 million in 2009.

Exports from WA

The global economic downturn saw WA's exports to IOR-ARC fall by 5% in 2009. Nevertheless, the value of exports had an average annual growth of 14% over the ten years to 2009. This growth was driven by exports to India, which had an average annual increase of 57% over the same period. For the 2009-10 financial year, India was WA's third largest export destination, accounting for 10% or \$9 billion of the total value of exports.

Growth in export values to India was driven, in turn, by non-monetary gold exports, which rapidly increased after gold import restrictions were eased in 2004 by the Indian government. Non-monetary gold features prominently in both WA's exports and imports due to the state's role in refining gold.

Value of Western Australia's Major Commodity Exports to IOR-ARC(a)

Commodity	2000 \$m	2009 \$m	10 year total \$m	Share of total WA exports to IOR- ARC %
Non-monetary gold	1,337	8,689	41,170	40.8
Petroleum, petroleum products & related materials	824	2,619	18,970	18.8
Metalliferous ores and metal scrap	76	404	2,688	2.7
Cereal and cereal preparations	18	888	1,587	1.6
Live animals	120	201	1,549	1.5
Total WA exports to IOR-ARC	5,326	16,944	100,966	
Total WA exports	29,466	76,973	479,077	
IOR-ARC share of total WA exports	%	%	%	
	18.1	22.0	21.1	

(a) Based on total value (fob) of exports from Western Australia to IOR-ARC between 2000 and 2009.

Confidential items were excluded from the ranking but were included in the total.

Source: ABS data available on request, *International Trade in Goods and Services, Australia*, cat no. 5368.0

Between 2000 and 2009, India received much of the non-monetary gold (65%) and metalliferous

ores and metal scrap (61%) exported from WA. Other significant exports to IOR countries included petroleum, petroleum products and related materials, 54% of which was received by Singapore. Indonesia and Malaysia were the primary markets for exports of cereals and cereal preparations (29% and 24% respectively). Indonesia was also the primary market for live animal exports (62%).

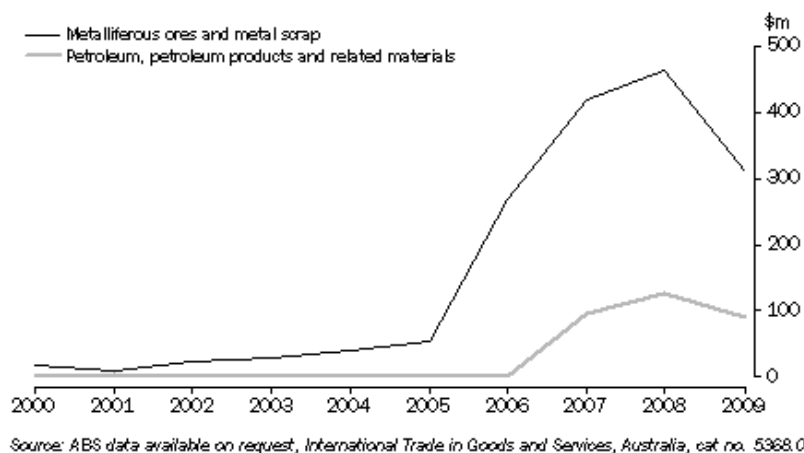
Further analysis of these export commodities reveals that approximately half of metalliferous ores and metal scrap exports to IOR-ARC countries consisted of copper ores and concentrates while crude oil made up nearly 95% of petroleum, petroleum products and related materials exports. Wheat was the major component (75%) of cereals and cereal preparations exports.

Potential for future export growth

The potential for a growing trade relationship between India and WA exists, with WA's oil, gas and mining sectors well-placed to supply India's industrial and infrastructure development. According to the Indian government's Eleventh Five Year Plan for 2007 to 2012, poor infrastructure in India is a significant barrier to economic growth. The government has focused on investing around US\$500 billion on infrastructure including oil and gas pipelines, railways, ports and airports.

WA's exports of metalliferous ores and metal scraps to India have increased from about \$16 million in 2000 to a peak of \$464 million in 2008. These may increase in the future according to India's preliminary assessment of a further US\$1 trillion investment in infrastructure during its Twelfth Five Year Plan.

Selected Exports to India, Western Australia



According to the International Energy Agency's 2010 forecasts, India will account for 18% of the increase in global energy demand to 2035, second only to China. India is a net importer of oil as a result of its relatively flat oil production and rising oil consumption. As outlined in the Eleventh Five Year Plan, the Indian government also intends to promote the country as a competitive petroleum refining destination. Consequently, the value of Western Australian exports of petroleum, petroleum products and related materials to India has jumped in recent years, from just \$36,000 in 2000 to around \$90 million in 2009. Liquid Natural Gas (LNG) exports to India are also set to increase substantially (from zero), with the signing of Australia's first long-term supply contract with India in 2009.

A feasibility study by the Department of Foreign Affairs and Trade on an Australia – India free trade agreement (FTA) indicates that there may be other opportunities for WA outside of the resources sector. According to the study, agricultural trade is likely to grow, particularly if India's agricultural tariff barriers (e.g. tariffs on Australian dairy products, which were lifted in 2009) are further reduced. Presently, the average of India's applied tariff rate for agriculture is 36% while Australia's average applied tariff is less than 2%.

Other FTAs, in place or currently under negotiation with IOR-ARC countries, include agreements with Singapore, Thailand, Indonesia, Malaysia and the United Arab Emirates (under negotiation with

the Gulf Cooperation Council), emphasizing their relationship with the Australian, as well as the WA, economy. WA's resources and agricultural industries feature broadly in these trade relations, with significant exports of petroleum to the refineries in South East Asia while agricultural exports reflect the IOR-ARC countries' demand for meat, cereals, vegetables and fruits.

Imports to WA

Western Australia's merchandise imports from IOR-ARC increased strongly from 2000 to 2009, albeit from a lower base than exports. Imports from the region saw an average annual growth of 23% during the period. Imports from Thailand contributed significantly to this growth, with an average annual growth rate of 44%.

In 2009, the value of imports from Thailand surpassed the value of those from Singapore (traditionally a major source of imports to WA) for the first time. This was driven by a \$1 billion increase in non-monetary gold imports from Thailand as well as a decrease of nearly \$2 billion in the import of petroleum oils (excluding crude) from Singapore during the year.

Imports of machinery and equipment from Thailand for WA's major resource projects have started to flow through during 2009, with a \$1 billion increase in imports of pumps, compressors and fans. Imports of prefabricated buildings from Thailand for the Gorgon LNG project are also expected to increase in the future, with 2010 data to October already valuing imports of prefabricated buildings at \$18 million, rising from \$127,000 in 2009.

As previously noted, imports from India have remained comparatively low, with a value in 2009-10 of only \$130 million (or 0.5% of all WA imports), including textile products, general industrial machinery and manufactures of metals. According to India's Department of Commerce, the top five countries importing from India were the United Arab Emirates, the United States, China, Hong Kong and Singapore. While, in 2009-10, India was WA's third largest export destination, it ranked 25th in the countries from which WA imported merchandise.

Value of Western Australia's Major Commodity Imports from IOR-ARC(a)

Commodity	2000 \$m	2009 \$m	10 year total \$m	Share of total WA imports from IOR- ARC %
Petroleum, petroleum products & related materials	686	3,616	21,883	37.3
Non-monetary gold	170	4,681	16,602	28.3
General industrial machinery, equipment & machine parts	44	1,819	3,557	6.1
Road vehicles	112	396	2,771	4.7
Office machines & automatic data processing machines	320	88	1,755	3.0
Total WA imports from IOR-ARC	1,945	12,445	58,650	
Total WA imports	8,927	29,529	176,971	
IOR-ARC share of total WA imports	%	%	%	
	21.8	42.1	33.1	

(a) Based on total value (customs value) of imports from IOR-ARC to Western Australia between 2000 and 2009.
Source: ABS data available on request, *International Trade in Goods and Services, Australia*, cat no. 5368.0

During the last decade, WA imported the largest proportion of its petroleum, petroleum products and related materials (37%); and office machines and automatic data processing machines (60%) from Singapore. General industrial machinery, equipment and machine parts; and road vehicles were imported primarily from Thailand (55% and 74% respectively). These countries were also the main

sources of non-monetary gold imports, with Singapore contributing 36% and Thailand 34%.

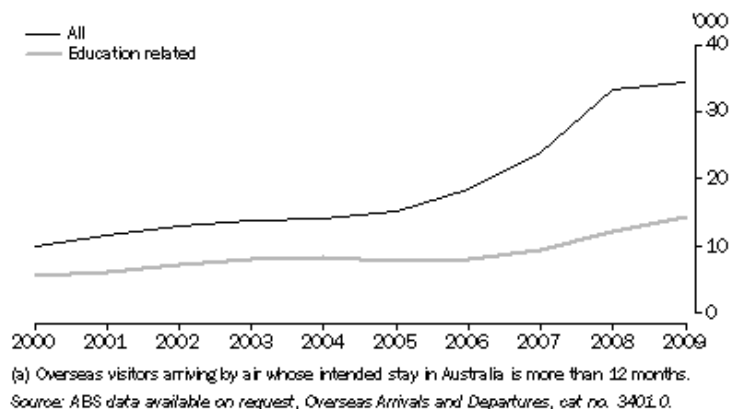
WESTERN AUSTRALIA'S SERVICES TRADE WITH IOR-ARC

Although detailed services trade data by country are not available for Australian states and territories, an examination of WA's international trade in services with all countries reveals that travel services accounted for a substantial proportion (59%) of services exports between 2000 and 2009. Further examination indicates that the main category of travel services was personal travel (89%), which comprised travel for education and other purposes including holidays. The significance of holiday and education-related travel to the WA economy is supported by data on WA's overseas arrivals from IOR-ARC.

Short-Term Visitors

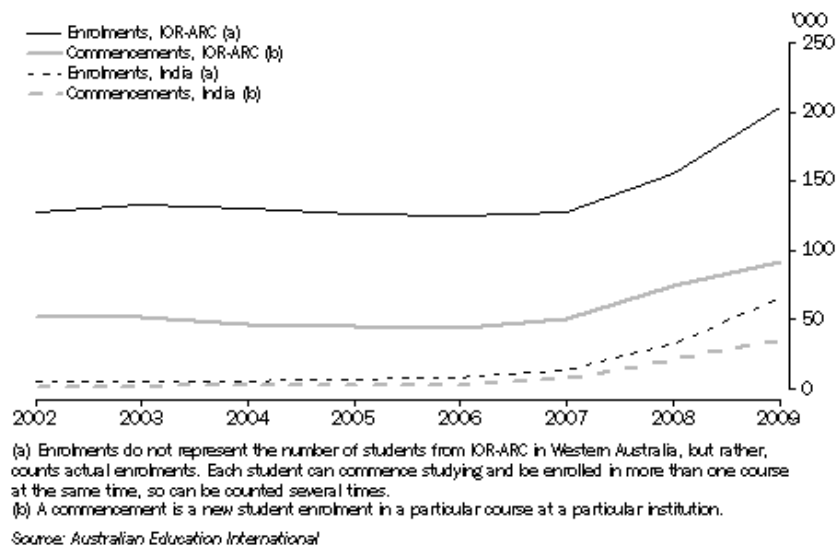


Long -Term Visitors



Estimates of Western Australia's overseas arrivals from 2000 to 2009 indicate that the number of short-term arrivals (staying less than 12 months) from IOR-ARC countries increased moderately, with 3% average annual growth. The increase in the number of long-term visitors (12 months or more) was proportionately larger with 15% average annual growth. During this period, nearly half (49%) of all short-term overseas arrivals from IOR-ARC to the state were holiday-makers and for long-term visitors, education (47%) was the main reason for travel.

Western Australia's IOR-ARC Student Enrolments and Commencements



Prior to 2007, both IOR-ARC student enrolments and commencements were slowly declining from the major source countries: Indonesia, Malaysia and Singapore. The increasing number of IOR-ARC student enrolments and commencements from 2007 to 2009 was largely driven by those from India. Enrolments from India more than doubled in both 2008 and 2009.

IOR-ARC Student Enrolments in Western Australia

Country	2002	2009	Total 2002-2009	Share of total IOR-ARC enrolments
	no.	no.	no.	%
Malaysia	35,001	45,743	324,058	28.7
Singapore	29,625	22,106	203,247	18.0
Indonesia	32,919	19,460	189,965	16.8
India	4,608	65,371	141,420	12.5
Thailand	9,629	11,707	80,727	7.2
Kenya	6,535	9,362	62,750	5.6
Mauritius	2,539	15,766	48,362	4.3
Sri Lanka	2,499	5,009	24,590	2.2
Bangladesh	1,728	2,408	17,784	1.6
South Africa	629	2,610	9,680	0.9
Oman	327	1,154	8,709	0.8
Iran	210	1,780	7,125	0.6
Tanzania	555	634	5,267	0.5
United Arab Emirates	115	608	4,229	0.4
Mozambique	26	48	477	0.0
Yemen	na	93	255	0.0
Madagascar	na	18	96	0.0
Total IOR-ARC student enrolments	126,945	203,877	1,128,741	100.0
Total overseas student enrolments	261,731	475,366	2,692,761	
IOR-ARC share of total overseas student enrolments in WA	%	%	%	
	48.5	42.9	41.9	

(a) Based on total number of student enrolments in Western Australia between 2002 and 2009.

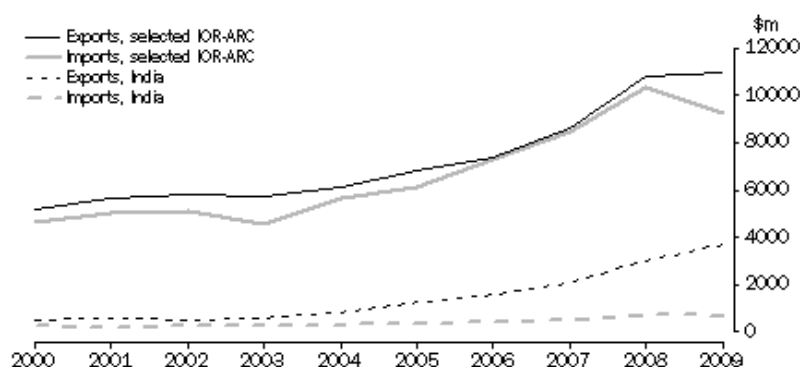
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Source: Australian Education International

Overall, Malaysia, Singapore and Indonesia were the major source countries for students in the eight year period from 2002 to 2009. However India surpassed Malaysia as the top source of IOR-ARC student enrolments in 2009, reflecting an increase in student enrolments from a growing Indian middle class. The high Australian dollar and changes to student visa rules, as well as negative publicity relating to recent attacks on Indian students in Australia, may impact on short-term future growth in Indian student enrolments.

Detailed services trade data by country at the Australian level offer an alternative perspective on services trade with IOR-ARC. Due to confidentiality requirements, international trade in services data are not published for many of the IOR-ARC countries. Nevertheless, aggregated services trade data on selected IOR-ARC countries (India, Indonesia, Malaysia, Singapore, South Africa and Thailand) can be used as an approximation of Australia's services trade with the IOR-ARC. Between 2000 and 2009, Australia's two-way trade in services with these IOR-ARC countries doubled, with a \$6 billion increase in services exports and a \$5 billion increase in services imports.

Australia's Services Trade with India and Selected IOR-ARC Countries(a)



(a) Based on India, Indonesia, Malaysia, Singapore, South Africa and Thailand.

Source: International Trade in Services, by Country, by State and by Detailed Services Category, cat no. 5368.0.55.004.

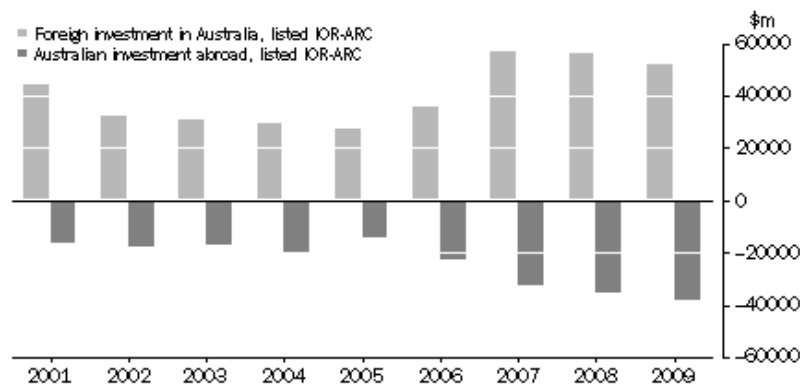
During the last decade, Australia recorded surpluses in services trade with the selected IOR-ARC countries. The main driver of growth was services exports to India, which showed an average annual growth of 26% over that period. India also surpassed Singapore as Australia's primary services exports destination within IOR-ARC for the first time in 2009.

From 2000 to 2009, Australia's services exports to listed IOR-ARC countries were mainly travel related (61%) while transport services made up more than half (52%) of services imports from listed IOR-ARC countries.

AUSTRALIA'S INVESTMENT WITH IOR-ARC

Again, due to confidentiality requirements, investment data are not published for many of the IOR-ARC countries. Nevertheless, the available published information shows that the levels of foreign investment in Australia from listed IOR-ARC countries exceeded Australian investment in those countries, reflecting Australia's traditional reliance on foreign direct investment as a source of finance.

Australia's Investment with IOR-ARC(a)



(a) Based on India, Indonesia, Malaysia, Singapore, South Africa and Thailand.

Source: *International Investment Position, Australia Supplementary Statistics*, cat no. 5352.0.

IOR-ARC investment in Australia has been declining since 2001 although it rose strongly, by around \$22 billion (60%), in 2007. This sharp increase was largely attributed to investments made by Singaporean government-backed entities during that year. Singapore is Australia's major source of foreign investment from IOR-ARC, contributing 76% of total published IOR-ARC investment. Singapore is also the primary IOR-ARC destination for Australian investment abroad, with 63% of total published Australian investment in the region.

While Singaporean investments in Australia are mainly concentrated in real estate and utilities, significant IOR-ARC investments in WA are focused in the resources industry. Notable investments include Indian interests in a US\$2.5 billion urea plant and \$80 million copper mine.

CONCLUSION

The major findings of the analysis indicate the increasing importance of India to the WA economy. WA exports to India have increased from around \$135 million in 2000 to nearly \$8 billion in 2009. However, non-monetary gold made up more than 85% of exports during the decade, highlighting the need for WA to diversify its merchandise trade with India.

The emergence of India as an important trading partner, along with its recent investments in WA, suggests that WA's economic relationship with India is evolving. Over the past ten years, India has overtaken Singapore as WA's main export destination within IOR-ARC and is also the major source, within the region, of overseas student enrolments, contributing the second largest number of overseas enrolments (after China) in 2009.

A growing middle class and ongoing economic reforms in India, together with a free trade agreement under consideration, mean that WA is positioned to benefit from India's economic growth. Additionally, Australia's increased role in the IOR-ARC over the next few years and Perth's position as an Indian Ocean Rim capital provide opportunities for Western Australia to diversify and develop stronger economic ties with India as well as the other IOR-ARC countries.

ACKNOWLEDGEMENT

This article was written by Huoy Wei Tang of the WA Department of State Development.

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Water Choices of Perth Households (Feature Article)

This document was added or updated on 02/12/2010.

WATER CHOICES OF PERTH HOUSEHOLDS

Securing and conserving our water resources is of fundamental importance for environmental, social and economic sustainability. Drying climatic conditions and population growth in the south west of Western Australia are increasingly presenting challenges for the long term sustainability of water resources for government and the community. Nowhere is this more evident than in the capital city, Perth, where almost three quarters of the state population resides.

Current state government policies and directions for ensuring the sustainability of Western Australia's water resources are outlined in the *State Water Plan 2007*. One of the key objectives of the plan is water conservation and efficiency across all sectors of water use. Western Australian households currently represent an important sector of water use and are likely to remain so in the future. According to the WA Water Corporation's most recent figures, 71% of Perth's scheme water usage is residential.

Water Forever, is the Water Corporation's strategy for delivering a sustainable water supply to Perth over the next 50 years. One of the main objectives of the plan is a 15% reduction in household and business water use by 2030 (and 25% by 2060) to ensure water supply can meet the future demand for Perth and surrounding areas. More efficient use of water by households will be a key factor in achieving this target as will be the increased use of recycled water.

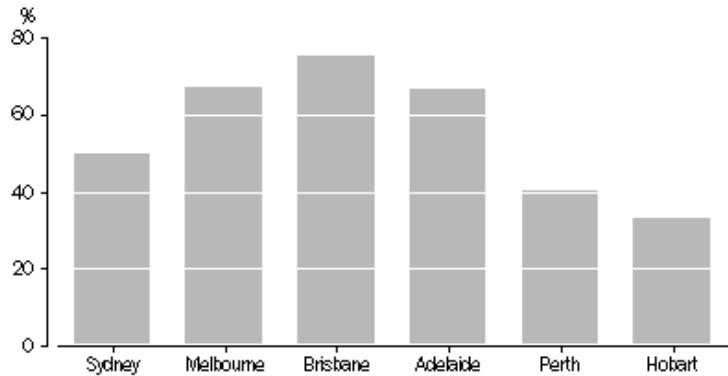
This article examines a range of factors impacting on water usage in Perth households in 2009, including household sources of water and the uptake of water-saving devices in the home and

garden. The article draws primarily on data from the *2009 Survey of Household Choices Related to Water and Energy* and compares water choices according to household size, tenure type, income and relative disadvantage of areas within the Perth Statistical Division. Information from other sources, including an ABS national survey on *Environmental Views and Behaviour* provide context and background.

PERSONAL WATER USE - VIEWS AND BEHAVIOURS

In 2007-08, the *Environmental Views and Behaviour Survey* found that almost nine in ten adults aged 18 years or over in Perth were concerned about water shortages while three out of four adults were concerned about climate change. However, only 40% of adults in Perth indicated that they had decreased their personal water use in the 12 months prior to the survey. Just over half (51%) of all adults stated that their water use had remained the same while for 8% it had increased. A lower proportion of people in Perth than in most other state capital cities in Australia reported that they reduced their personal water use. The stricter water restrictions operating in New South Wales, Victoria and South Australia at the time of the survey are one likely contributor to this difference.

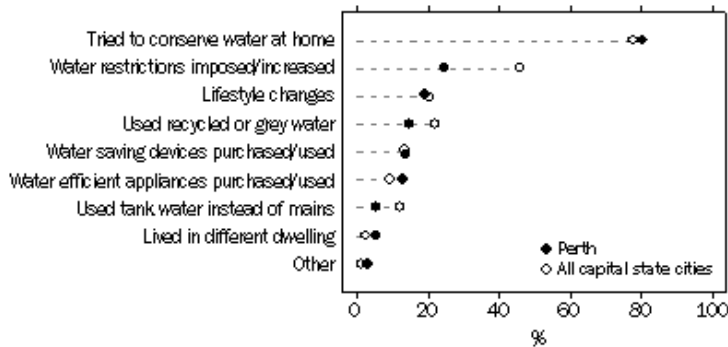
Decreased Personal Water Use in the Previous Year, 2007-08



Source: *Environmental Views and Behaviour 2007-08*, (cat no 4626.0.55.001)

In 2007-08, those survey respondents who reported a decrease in their personal water use were asked to identify reasons for the decrease. Some survey respondents cited more than one reason. Four out of five adults (80%) in Perth indicated that they had actively tried to conserve water at home. One in four said that the tightening of water restrictions was a reason for reducing personal water use. However, people in Perth were less likely to cite water restrictions as a reason than people in other city locations (25% compared with 46% nationally).

Reasons Given for Reducing Personal Water Use 2007-08(a)



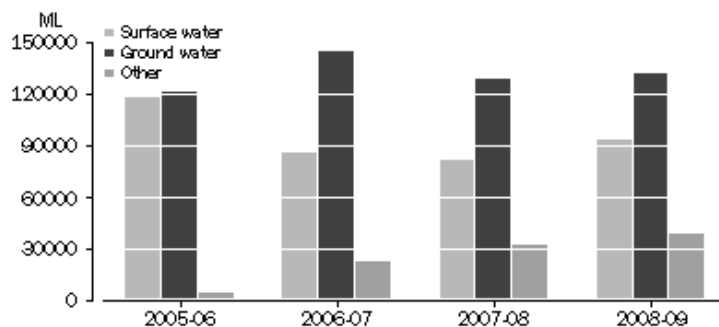
(a) Excluding Darwin and ACT.
Source: *Environmental Views and Behaviour, 2007-08* (cat. no. 4626.0.55.001)

Of those who had increased their personal water use, a lifestyle change (42%) was the most common reason given, followed by increased water needs in the garden (26%).

PERTH'S WATER SUPPLY

The average 'wet season' rainfall in the south west of Western Australia has declined by 10% since the mid 1970s, resulting in a 50% reduction in the stream flows into Perth dams over the past 40 years (CSIRO & Bureau of Meteorology). As a consequence of lower stream flows into the dams, Perth has drawn increasingly from other sources of water in recent years. In 2008-09, half (50%) of Perth's scheme water came from ground water resources while one third (35%) was supplied from surface water (dams). The Perth sea water desalination plant in Kwinana, which was commissioned by the Water Corporation in 2006, provided 13% of Perth's scheme water.

Sources of Water, Perth



Source: National Performance Report 2008-09, Urban Water Facilities (National Water Commission)

The Integrated Water Supply Scheme (IWSS) operated by the Water Corporation delivers most of the water in the Perth metropolitan region. In 2008-09 the volume of scheme water supplied to Perth by the IWSS was 264,352 megalitres, 4.5% more than was supplied in the previous year and 8% more than in 2004-05. In 2008-09, two thirds (66%), or 174,401 gegalitres, of this water was supplied to residential properties, an increase of 5% compared with the previous year and 8% more than in 2004-05. This increase in use must be seen in the context of a growing population. Since 2004-05, the number of residential properties and population accessing the IWSS have increased by 12% and 13% respectively.

Water for the IWSS comes from three sources:

Surface water is obtained from dams (storage reservoirs) in the Darling Range. Surface water sources supply between 25% and 45% of the water for the IWSS. The dams supplying water are Canning, Serpentine Pipehead, Conjurunup Pipehead, Victoria, Mundaring Weir, South Dandalup, North Dandalup, Wungong, Stirling and Churchman's Brook. Note that Mundaring Weir normally only supplies water to the Goldfields and Agricultural Region.

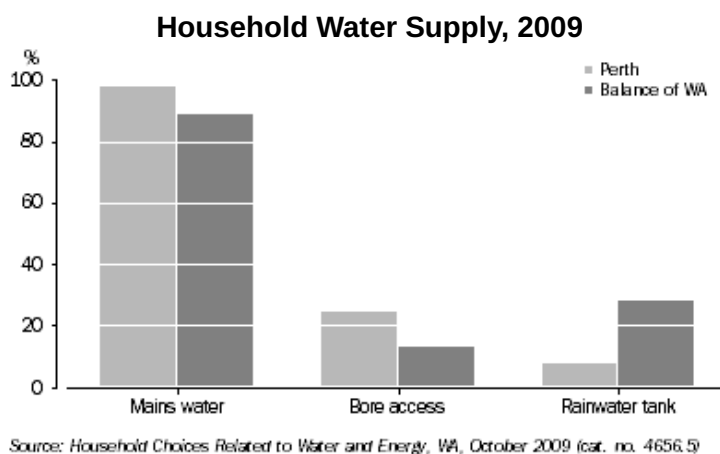
Groundwater, supplying 35-50% through the integrated system, is obtained from natural reservoirs in the deep sands of the coastal plain. It is treated at groundwater treatment plants at Jandakot, Mirrabooka, Wanneroo, Neerabup, Lexia and Gwelup before being added to the distribution system. The largest aquifer to support Perth's water supply is the Gnangara Mound (located north of Perth); it currently supplies about 60% of total groundwater.

The Perth Seawater Desalination Plant in Kwinana supplies 15-20% of water needs. The largest desalination plant in the southern and eastern hemispheres; it produces on average 130 million litres of water a day.

Household Sources

In 2009, almost all (98%) households in Perth were connected to mains water. Mains water provides scheme water of a quality fit for drinking. Rainwater tanks and garden bores can provide an alternative source of water for households, particularly for gardens, lawns and outside use, thereby relieving pressure on mains water supply. In 2009, less than 8% of Perth households had a rainwater tank, compared with 28% in the balance of WA. One quarter (25%) of Perth households surveyed in the *2009 Survey of Household Choices Related to Water and Energy* reported that they had access to a garden bore, a higher proportion than in other areas of the state (13%).

If used responsibly, and located away from the ocean, river systems and wetlands, garden bores can be a suitable supply of water for outdoor use (*State Water Plan 2007*). The Water Corporation supports increased monitoring and reporting on this resource to ensure its long term sustainability. As would be expected, households in separate dwellings were more likely than those in other dwelling types to have access to these alternative water sources.

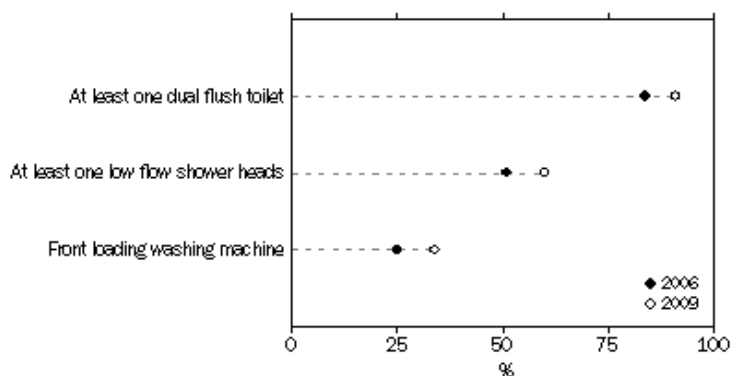


Water Saving Facilities

About half of household water use is inside the home. (For more detailed information see the Water Corporation's *Perth Residential Water Use Study, 2008-09*.) The use of more water efficient appliances combined with behaviour change around the home can greatly reduce this water consumption. To stimulate the uptake of water efficient fixtures and appliances and to drive market innovation, the state government introduced a rebate scheme in 2003 which ran for six years. The Commonwealth *Water Efficiency Labelling and Standards Scheme (WELS)*, introduced in 2006, required a water using fixture or fitting to be rated for its water efficiency. From July 2006, the products legally required to have a WELS rating include shower heads, tap equipment, toilet and urinal equipment, clothes washing machines and dishwashers. Furthermore, all new homes and major renovations in WA are now required to meet minimum 'Five Star' water efficiency standards.

The proportion of Perth households having more water efficient toilets, shower heads and washing machines has increased over the past few years. Between 2006 and 2009, the proportion of dwellings in Perth with at least one dual flush toilet increased from 84% to 91%, while those with at least one low flow shower head increased from 51% to 60%. The proportion of dwellings with front loading washing machines grew from 25% to 34% over the same period.

Water Saving Facilities in Perth Households



Source: Household Choices Related to Water and Energy, WA, October 2009 (cat. no. 4656.5)

WATER CHOICES AND HOUSEHOLD TYPE

The presence of water saving devices in the home varied by household type. In general, households with higher incomes, in separate houses and owner-occupied dwellings were more likely to have water efficient fixtures and appliances in the home than other household types. For example, dwellings that were fully owned or being purchased were more likely to have at least one low flow shower (66%) than rental dwellings (46%). Similarly, low flow showers were more likely to be present in separate houses (64%) than in other dwelling types (49%). Almost half (47%) of Perth households with an annual income greater than \$110,000 per year had a front loading washing machine, compared with 20% of those with an annual income of less than \$25,000.

The presence of water saving fixtures and appliances also increased with household size. Households with three or more people were more likely to have at least one low flow shower and a front loading washing machine than single person households.

With around half of household water use in Perth occurring outside the home, dwelling type can have a major impact on household water use. Multiple dwellings (terrace houses, townhouses or apartments) are likely to have smaller living areas, smaller gardens (or no garden) and therefore lower water consumption. The 2009 *Survey of Household Choices Related to Water and Energy* found that over three-quarters (78%) of Perth households lived in detached dwellings (separate houses) and almost all of these homes (98%) had a garden and/or lawn. By comparison, less than half (41%) of households occupying other housing types had gardens or lawns.

Household Water Characteristics, Perth - 2009

Household type	At least one dual flush toilet	At least one low flow shower	Front loader	Has garden or lawn	Has access to bore	All households
	%	%	%	%	%	'000
Dwelling Type						
Separate house	91.8	63.6	34.3	97.6	30.5	505.9
Other dwelling type (a)	87.3	49.0	30.4	41.4	3.5	140.6
Tenure (b)						
Fully owned/being purchased	92.3	65.7	34.8	91.6	27.8	454.6
Renting	87.5	46.2	30.2	70.0	16.2	174.5
Household Size						
One person	86.0	52.9	23.7	72.3	19.9	169.2

Two person	89.9	58.6	32.9	86.7	24.8	212.9
Three or more persons	94.5	66.7	40.2	92.8	27.4	264.5
Household Income (c)						
Less than \$25 000	81.6	51.9	20.2	77.9	25.3	112.7
\$25 000 to less than \$50 000	90.0	58.9	26.0	79.4	23.6	113.5
\$50 000 to less than \$70 000	91.2	53.7	26.7	82.8	20.5	95.0
\$70 000 to less than \$110 000	93.7	64.5	39.9	91.4	24.5	126.6
\$110 000 or more	95.0	68.9	46.9	92.3	26.6	169.9
All households ('000)	90.8	60.4	33.5	85.4	24.6	646.5

(a) Includes categories semi-detached, row or terrace house, townhouse etc. Flat, unit or apartment and other housing types.

(b) Excludes other.

(c) Excludes don't know/refusal.

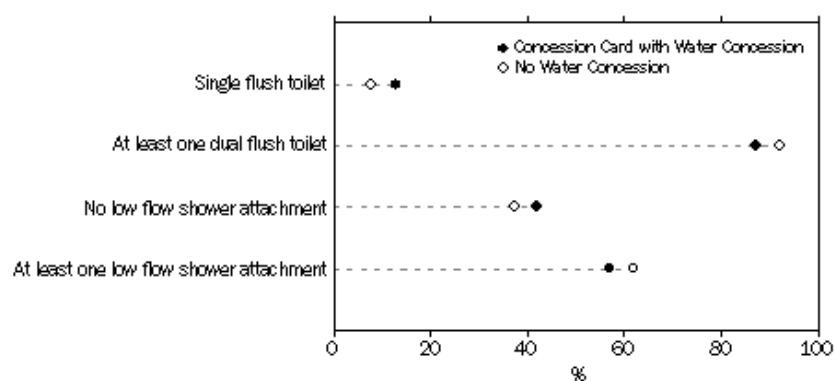
Source: *Household Choices Related to Water and Energy, WA, October 2009* (cat. no. 4656.5)

Households Receiving Concessions on Water Charges

The Water Corporation offers rebates to eligible pensioners and seniors to help maintain affordability of water services. Holders of a WA Seniors Card, a Commonwealth Seniors Health Card, a Pensioner or State Concession Card, may receive rebates on their annual water service charges. Of the estimated 179,800 households in Perth that received some form of concession on water bills, 13% had single flush toilets only in their home. The remaining 87% had at least one dual flush toilet. Of the households receiving concessions, 57% had at least one low flow shower head.

Households not receiving concessions were more likely to have water efficient toilets and showers installed. The proportion with single flush toilets only, therefore, dropped to 8%, while 92% had at least one dual flush toilet. Likewise, the proportion with low flow shower head attachments was higher (62%) in households not receiving concessions.

Water Saving Facilities, Households with and without Concession Cards, Perth - 2009



Source: *Household Choices Related to Water and Energy, WA, October 2009* (cat. no. 4656.5)

AREAS OF RELATIVE DISADVANTAGE

As indicated above, water choices tend to vary with household size, tenure type and dwelling type. As part of this analysis, the relative socio-economic disadvantage of the area in which the household was located was also investigated.

The following analysis examines water choices in Perth homes in terms of the *Index of Relative Socio-Economic Disadvantage (IRSD)*, one of four *Socio-economic Indexes for Areas (SEIFA)* developed by the ABS. It should be noted that the SEIFA ranking attaches to areas, not to persons, households or dwellings. It provides a summary of the socio-economic characteristics of an area. In particular, the IRSD ranking represents the relative level of socio-economic disadvantage in the area in which a person lives.

Index of Relative Socio-Economic Disadvantage (IRSD)

The ABS has developed four Socio-Economic Indexes for Areas (SEIFA) to rank the level of social and economic well-being of a region. The SEIFA indexes are created by combining information collected in the five-yearly Census of Population and Housing. The Index of Relative Socio-economic Disadvantage (IRSD), used in this article, combines 17 variables from the 2006 Census (including income, education and unemployment) relating to the people, families and dwellings within each area; and ranks these areas on a scale of relative disadvantage. For the purposes of the investigation, all areas within Western Australia were ordered into quintiles according to their IRSD score. The first quintile (the lowest 20%) represents the areas of greatest relative disadvantage and the fifth quintile (the highest 20%) represents the areas of least relative disadvantage.

The map attached to this article (Attachment 1) shows the IRSD for census collection districts (CCDs) within the Perth region. At the time of the 2006 Census, the CCD was the smallest geographic area in the *Australian Standard Geographic Classification (ASGC)*, with an average of 225 dwellings per CCD.

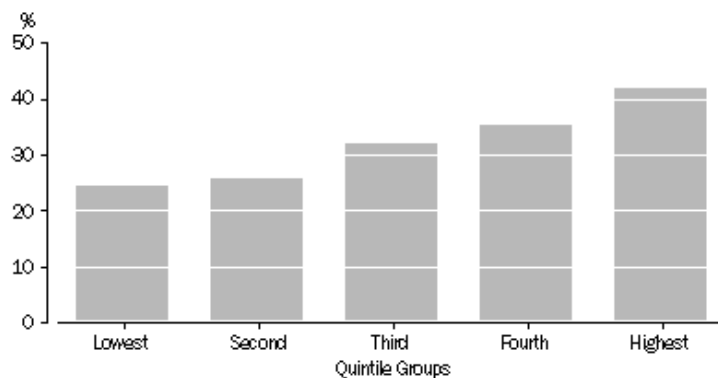
For more information on SEIFA see Information Paper: An Introduction to Socio-Economic Indexes for Areas (SEIFA) 2006 (ABS cat. no. 2039)

In general, households located in more disadvantaged areas of Perth were more likely to be renting and contain fewer people. They were also more likely not to be living in a separate house and to be receiving concessions on their water bills. Households in the areas with the greatest relative disadvantage (lowest quintile) were most likely to have these attributes. In contrast home ownership rates, household size and the number of people in the dwelling increased for households in areas that were less disadvantaged.

Water Saving Devices by Disadvantage

While there was no discernible pattern in the relative disadvantage of an area and the proportion of households with dual flush toilets or low-flow showers, there was a noticeable pattern in the proportion of households with front loading washing machines. This proportion decreased with the relative disadvantage of the area. Only one-quarter (24%) of households in the lowest quintile had a front-loading washing machine, compared with 42% of those in the highest quintile.

Households with Front Loading Washing Machines, Perth, 2009

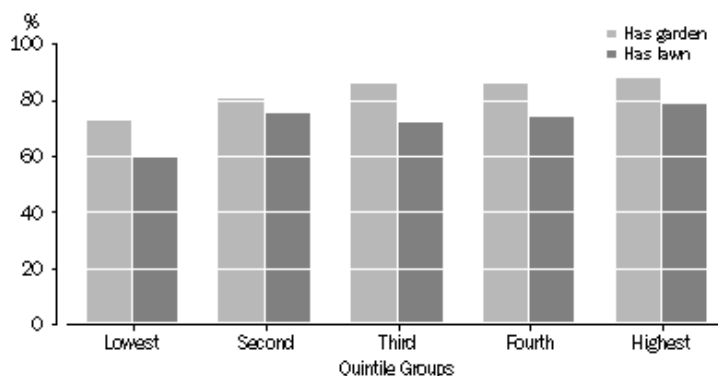


Source: Household Choices Related to Water and Energy, WA, October 2009 (cat. no. 4656.5)

Gardens and lawns by relative disadvantage

In 2009, households in the lowest IRSD quintile were least likely to live in a dwelling with a garden or lawn, reflecting their lower propensity to live in a separate house as opposed to a higher density dwelling.

Perth Households, by Relative Socio-economic Disadvantage of Area, 2009



Source: Household Choices Related to Water and Energy, WA, October 2009 (cat. no. 4656.5)

CONCLUSION

In recent years, there has been growing community concern about the diminishing supply of water in Perth dams, the associated rising cost of water to consumers and the tightening of restrictions on the use of mains water in metropolitan gardens. Although a significant proportion of residents in the Perth metropolitan region reported a reduction in their water use in 2007-08, a 12% rise in the population over the last five years has been accompanied by a rise of approximately 8% in total residential scheme water use.

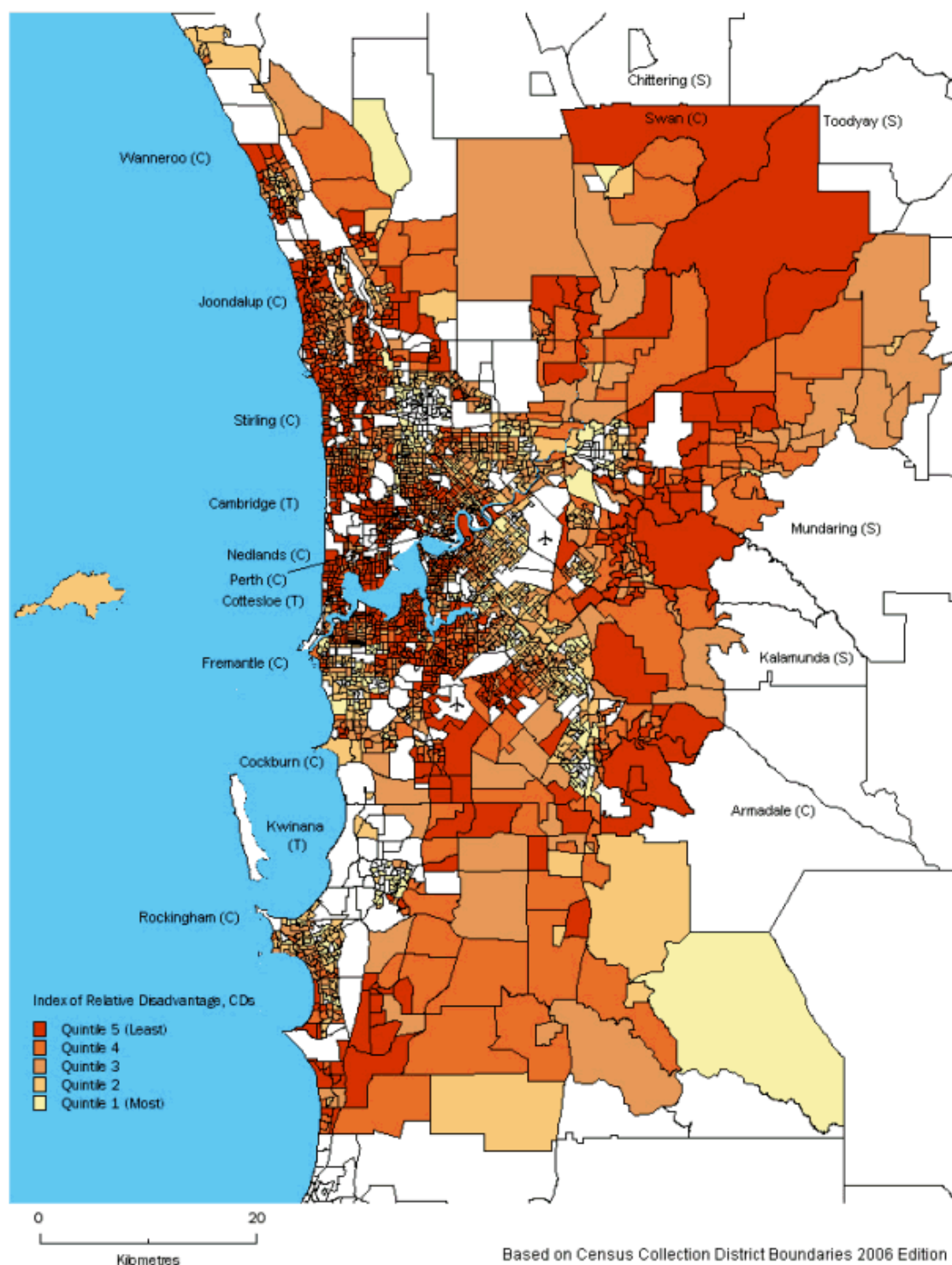
Between 2006 and 2009, there was a significant increase in the uptake of water efficient fixtures and appliances in Perth homes, particularly low flow showers, dual flush toilets and front loading washing machines. In general, uptake of these devices was greater for households in detached (separate) dwellings; in owner-occupied dwellings; and households with three or more people. Uptake was greater also in households with higher incomes and those not receiving any concessions for their water services.

Such households were more likely to have access to water efficient fixtures and appliances inside the home than other household types; for example, renters, persons living alone, households with low incomes, and those in higher density housing. However, households with access to water

efficient fixtures and appliances within the home were also more likely to have lawns and gardens, currently responsible for around half of all domestic scheme water usage. These findings suggest that, in the face of continuing low rainfall and a rapidly growing population, an understanding of the water choices made by different households will be needed to inform policy on ensuring a sustainable water supply for Perth.

ATTACHMENT 1

Index of Relative Socio-Economic Disadvantage, Collection District Quintiles, Perth Statistical Division



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A View of Housing Density in Perth, 2005-2009 (Feature Article)

This document was added 30/07/2010.

A VIEW OF HOUSING DENSITY IN PERTH, 2005-2009

INTRODUCTION

Over the four years to June 2009, Western Australia was the fastest growing state by population, with Perth being the fastest growing capital city (*Regional Population Growth*, cat. no.3218.0). As a result, there has been much debate and interest in strategic planning initiatives to ensure that adequate land, infrastructure and services will be available to accommodate the expanding population.

Under a national objective, aimed at ensuring that 'Australian cities are globally competitive, productive, sustainable, liveable and socially inclusive and are well placed to meet future challenges and growth', the Council of Australian Governments (COAG) has agreed to a series of criteria relating to land-release policies; urban design; integration of nationally significant infrastructure; the clarity of future planning measures; and policies to encourage investment. As a corollary to the COAG criteria, the Western Australian government has also been addressing residential density, specifically for Perth.

This study explores the extent to which residential densities in Perth may be changing, as indicated by the relative proportions of building approvals for low, medium and high density housing, in recent years compared with a decade ago.

BACKGROUND

The ABS publishes monthly building approvals data, collected primarily from local government authorities, for all states and territories. The Functional Classification of Buildings (FCB) classes residential dwellings into three broad types: houses; semi-detached, row or terrace houses, townhouses, etc; and flats, units or apartments (see ABS Functional Classification of Buildings, 1999). Although plot sizes would provide additional useful information pertaining to the proposed number of dwellings per hectare, these three dwelling types may be roughly interpreted to align with low, medium and high density housing respectively.

In 2001, the ABS published a study investigating the mix of dwelling types for the Perth metropolitan area, using building approvals data for three financial years from 1998-99 to 2000-01. With a focus on trends in medium density development, the study employed a modified grouping to identify *Clustered dwellings*. Clustered dwellings included Grouped (two or more) detached houses on a single parcel of land, as well as Semi-detached, row or terrace houses and townhouses. Under the FCB, these *Grouped houses* remain under the *Houses* category by virtue of their detached status.

Grouped houses, however, generally have smaller lot sizes, often have shared driveways and gardens and potentially lower average values, thereby demonstrating many similarities with the semi-detached building category. Combining the two types to form the category *Clustered dwellings* provides a different representation of medium density housing approvals in Perth and offers the potential to better inform decision-makers with regard to planning and infrastructure development for the community (see A View of Housing Density in Perth, Dec 2000).

Renewed interest among WA agencies concerned with future housing development in the Perth metropolitan area indicated the need to investigate present trends in dwelling type approvals and changes that may have occurred since 2001. This article presents the findings of the follow-up investigation.

BUILDING APPROVALS IN PERTH, 2005-2009.

The table below presents the total number of dwelling units approved in the Perth Statistical Division (SD), according to building type as classified by the FCB over the four financial years 2005-06 to 2008-09.

NUMBER OF DWELLING UNITS APPROVED, Perth Statistical Division

Building type (FCB)	2005-06	2006-07	2007-08	2008-09	Total
Houses	15 388	13 400	11 732	11 104	51 624
Semi-detached, etc(a)	1 606	1 890	2 158	1 629	7 283
Flats, units and apartments	1 468	2 126	3 033	1 053	7 680
Total	18 462	17 416	16 923	13 786	66 587

(a) Includes row or terrace houses and townhouses.

Source: ABS data available on request, *Building Approvals, Australia* (cat. no. 8731.0).

There was a steady decline in total dwelling units approved for the Perth SD over the four years, with the number in 2008-09 (approximately 13,800) being 25% lower than the number in 2005-06. The drop in building approvals in 2008-09 was largely driven by the high level of approvals for Flats, units and apartments in the preceding year which was followed by a significant reduction in 2008-09. The total decline in approvals for that year also reflects the loss of home buyer confidence as a result of the global financial crisis.

Approvals for Houses made up 78% of all dwelling unit approvals over the four years, with a further

11% of approvals being for Semi-detached, row or terrace houses and townhouses and 12% for Flats, units and apartments. These proportions were fairly consistent across the four-year period and consistent with the years analysed in the 2001 study. An exception was 2007-08, when the proportion of Houses fell considerably and the proportion of Flats units and apartments increased.

The proportions of approvals by building type also mirror the distribution of housing stock as reported in the 2006 Census of Population and Housing. Records for the Perth SD from the 2006 Census show 78% of dwellings as Separate houses, 12% as Semi-detached, row or terrace houses and townhouses, and 10% as Flats, units or apartments.

AN ALTERNATIVE PERSPECTIVE ON HOUSING DENSITY

Methodology

This analysis used the same methodology as the 2001 study to identify Clustered dwellings and applied it to building approvals data from the four financial years from 2005-06 to 2008-09 (the most recent data at the time of writing). As in the previous study, the analysis was largely based on aggregated data to 'smooth out' potential aberrations in annual figures. Because of the significant effects of the global financial crisis on residential building approvals in recent years, the decision was made to include four, rather than three, financial years.

To enable comparisons between the findings of the two studies and measure some aspects of change in housing density since 2001, as portrayed by building approvals, the findings are presented in a generally similar manner. However, the measure of Gross Site Area (GSA), a significant indicator of housing density included in the 2001 analysis, is not included here because this information was reported for only 13% of building approvals between 2005 and 2009 and was deemed unsuitable for dissemination. Although the floor area of the dwelling, which is better reported by local councils, is a less than perfect surrogate for gross site area, some analysis of building approvals by floor area was undertaken in this study to provide further insight into the densification question. Building approvals were also analysed according to dwelling values to see how these relate to dwelling density across the Perth Statistical Division (SD).

As with the previous study, this analysis was undertaken with the knowledge that building approvals statistics were not specifically designed to measure trends in dwelling density. Local observation suggest there has been an increasing trend of single detached houses being demolished and replaced by two or three grouped houses. The absence of data about demolitions represents a significant gap in the data.

Other Data Limitations

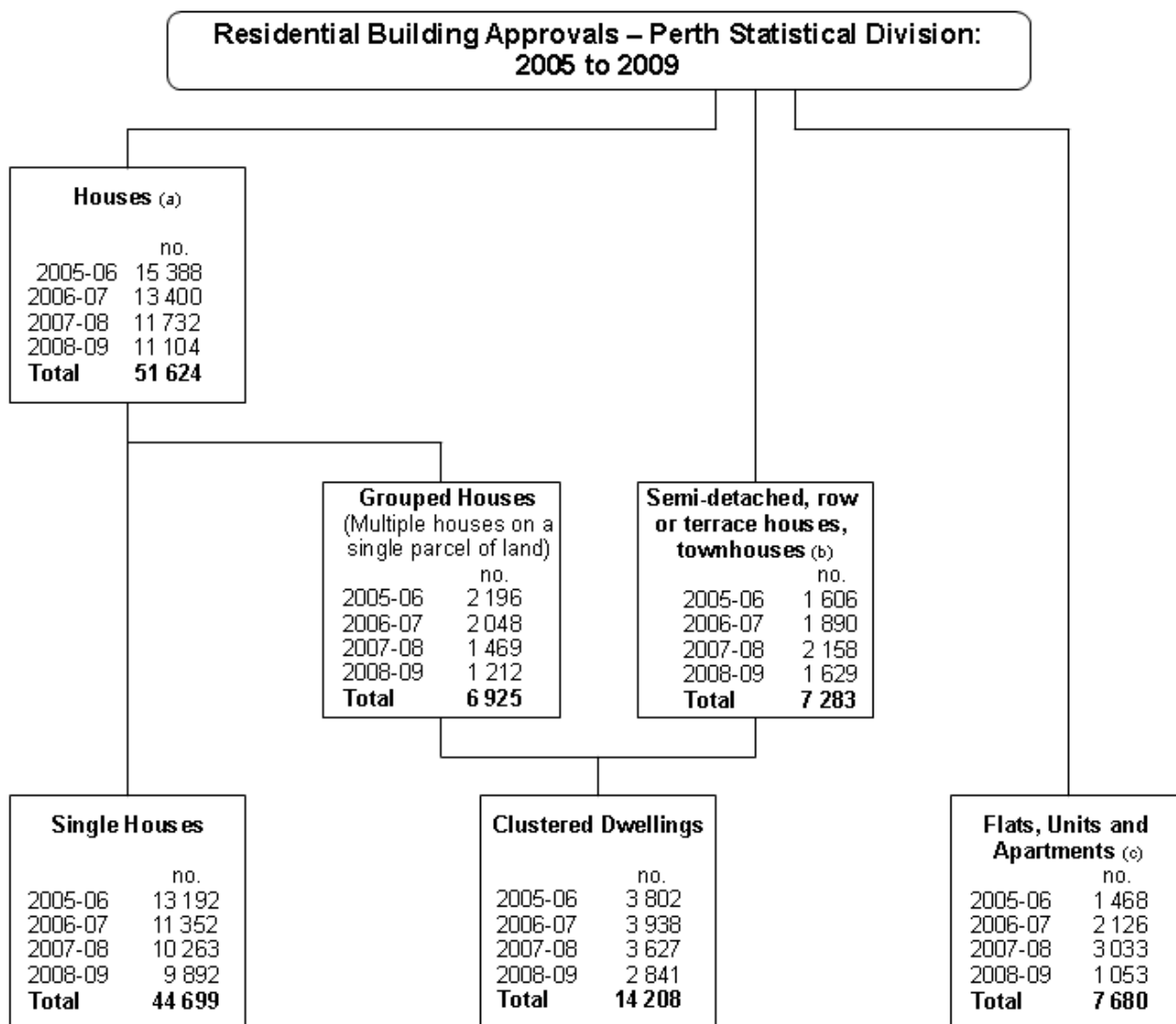
In considering how well dwelling approval records may inform about likely outcomes in housing density, and whether apparent trends in density may either be missed or overstated, the following caveats are provided to explain potential data quality issues. It is also likely that approving bodies or councils differ in the way they report approvals.

- For greenfields, or large in-fill developments undertaken by a single developer, several houses may appear with essentially the same address though they are being built on separate lots.
- An individual approval may include multiple houses being built in an area by one developer but at separate addresses.
- An approval relating to more than one dwelling does not necessarily mean that the dwellings are clustered or collocated to an address.
- In-fill resulting in additional dwellings on a lot with already established dwelling(s) is not identifiable. This includes cases where a block has been subdivided as well as direct in-fill on the same lot.
- Multiple approvals may be received for attached dwellings being built to the same lot.

With the above data limitations in mind, the following analysis provides an alternative view of low medium and high density housing based on residential dwelling approvals, in which:

- Single Houses are detached dwellings on a single parcel of land and represent **Low density dwellings**.
- Clustered dwellings are the sum of Semi-detached, row or terrace houses and townhouses and Grouped houses on a single parcel of land and represent **Medium density dwellings**.
- Flats, units and apartments remain their own group and represent **High density dwellings**.

The following chart presents this alternative view of housing density relating to building approvals in the Perth SD between 2005 and 2009.



(a) FCB classification codes 111 to 113.

(b) FCB classification codes 121 and 122.

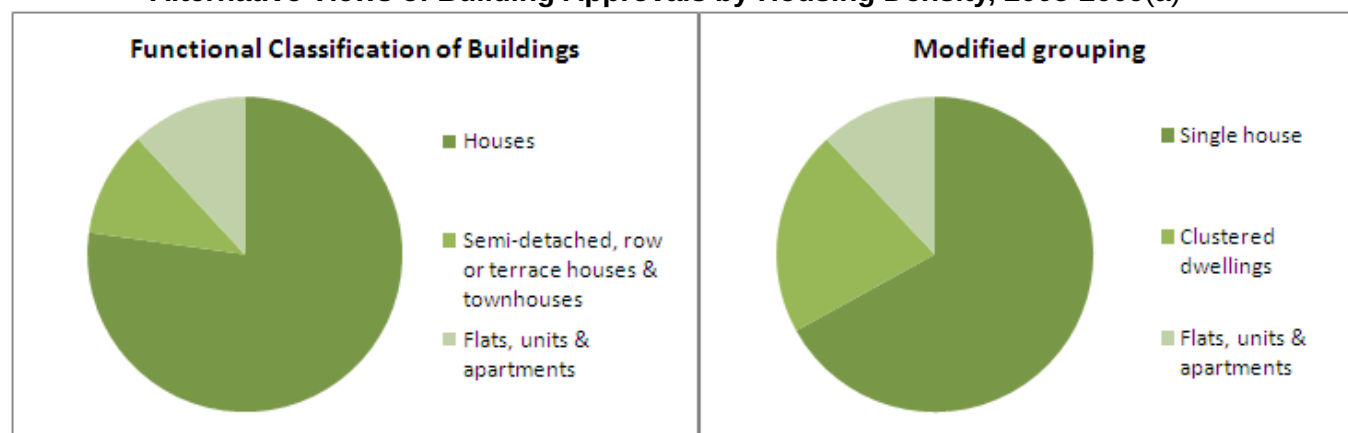
(c) FCB classification codes 131 to 134.

Based on the FCB, there were 51,600 Houses approved over the four financial years reported, representing 78% of total dwelling units approved. Of those, 6,900 (13%) were identified as consisting of more than one house built on a single parcel of land (Grouped houses). The proportion of these Grouped houses to total houses varied from a high of 15% in 2006-07 to a low of 11% in 2008-09. Removing Grouped houses from the Houses category resulted in Single houses approvals making up 67% of total approvals. This proportion was at its lowest in 2007-08 (61%) and its highest in 2008-09 (72%).

In comparison, based on the FCB, there were 7,300 approvals for Semi-detached, row or terrace houses and townhouses approved over the same four year period, representing 11% of total dwelling units approved. Combining these with approvals for Grouped houses resulted in 14,200 units identified as *Clustered dwellings*. These Clustered dwellings comprised 21% of total approvals, a proportion that remained relatively unchanged over the four financial years.

Differences in the distribution of building approvals coded to the FCB and the modified grouping for approvals are shown in the graphs below.

Alternative Views of Building Approvals by Housing Density, 2005-2009(a)



(a) Data are aggregated for the four financial years

The findings from this study indicate that there was little change in the broad mix of approvals for Single houses and Clustered dwellings from 2001. The 2001 study reported that Single houses accounted for 68% of all residential building approvals, as compared with 67% in the present study. Similarly, the 2001 study showed that Clustered dwellings accounted for 23% of all approvals, a slightly higher proportion than was found in the current study (21%).

Although the modified groupings used in the analysis had no impact on the category of Flats, units and apartments, approvals for this accommodation type increased as a proportion of all approvals from 9% to 12% between the two study periods. Thus the three percentage point increase in approvals for this *High density* accommodation was associated with a 1% fall in approvals for *Low density* (Single houses) and a 2% fall in approvals for *Medium density* (Clustered dwellings).

The following section presents more detail about the types of clustered dwellings that were approved in the 2005-09 period and compares with results from the 2001 study.

CLUSTERED DWELLINGS

The extent to which dwelling density in urban areas is increased by building Clustered dwellings, rather than Single houses, partly relates to the number of dwelling units associated with each Clustered dwelling approval. The following table shows approvals for Clustered dwellings in the Perth SD for the four years to 2009 according to the number of dwelling units associated with these approvals.

APPROVALS FOR CLUSTERED DWELLINGS(a), Perth Statistical Division

NUMBER OF DWELLINGS						
Dwelling units per approval	2005-06	2006-07	2007-08	2008-09	Total	% of total
2	792	672	736	608	2 808	19.8
3	876	939	837	705	3 357	23.6
4	480	456	484	320	1 740	12.2
5 or more	1 644	1 857	1 567	1 206	6 274	44.2

Other (b)	10	14	3	2	29	0.2
Total	3 802	3 938	3 627	2 841	14 208	100.0

(a) Grouped houses on a single parcel of land plus Semi-detached, row or terrace houses, townhouses.

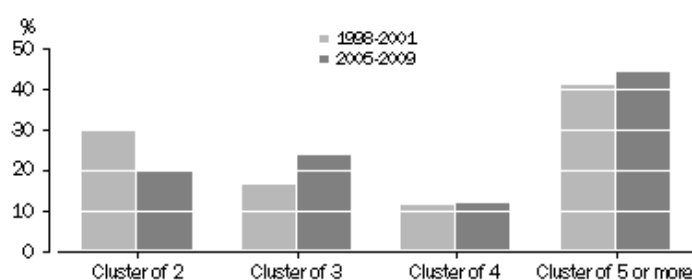
(b) Unable to establish cluster category.

Source: ABS data available on request, *Building Approvals, Australia* (cat. no. 8731.0).

Over the four year period, the highest proportion of Clustered dwellings were for approvals of five or more dwellings units (44%), a slight increase on the proportion presented in the 2001 study (41%). These approvals are likely to include quite large developments such as retirement villages.

Clustered dwellings of three units made up 24% of total clustered dwelling approvals, which was a considerably higher proportion than reported in 2001 (16%). In contrast, Clustered dwellings with two units per approval comprised only 20% of total clustered approvals, down from 30% reported in the previous study.

Clustered dwelling approvals(a):



(a) Grouped houses on a single parcel of land plus Semi-detached, row or terrace houses, townhouses.

Source: ABS data available on request, *Building Approvals, Australia* (cat. no. 8731.0) and *A View of Housing Density in Perth, Dec 2001*.

The recent trend away from building two Clustered dwellings in favour of three Clustered dwellings may reflect a shift towards higher density grouped developments to allow for greater utilisation of available land resources. Such a trend may be seen as addressing, to some degree, the need for greater densification to accommodate Perth's expanding population.

GROSS SITE AREA, FLOOR AREA AND VALUE

Looking at changes in building approvals by dwelling type gives a partial view of trends in housing density. It is also important to consider the size of the site area or plot on which the dwellings will be built. While the 2001 article analysed Gross Site Area (GSA) attaching to dwelling approvals, this data item was reported for less than 13% of dwelling approvals over the last four financial years and was therefore deemed unsuitable for use in this study.

Although floor area relates only to the dwelling itself and not to the land it is built on, it does provide a useful indication of building size and perhaps sheds some light on associated patterns of housing density. Floor area, as reported in building approvals data, was therefore investigated in this study to test the notion that grouped houses would have a lower average floor area than single houses on their own parcel of land.

Average Floor Area

For the period between July 2005 and June 2009, floor area was reported for 70% of Houses approved in the Perth SD. This reporting rate allows for analysis of floor size for this dwelling type. During the same period, however, reporting rates for floor area of Semi-detached dwellings and for Flats, units and apartments were only around 35%: this level of reporting precludes anything but the broadest general comment about sizes of these dwelling types. Across all dwelling types, non-reporting of floor area was concentrated in certain areas; for example in 2008-09, nearly 2,500 approvals issued in the cities of Stirling, Gosnells, Nedlands and Perth omitted this value.

Floor area is reported in square metres and relates to any part of the building bounded by external walls, excluding carports and pergolas. Average floor area data represents the average only of records for which floor area has been reported.

The table below shows average floor area for Single houses, Grouped houses and all Houses over the four years of the study period.

AVERAGE FLOOR AREA (a), House Approvals - Perth Statistical Division

	2005-06	2006-07	2007-08	2008-09	Total
Square metres (m2)					
Single houses (b)	262	268	273	254	264
Grouped houses (b)	164	166	170	166	166
All Houses	253	258	264	247	256

(a) Floor area information reported for only 70.3% of house approvals.

(b) On a single parcel of land (modified grouping).

Source: ABS data available on request, *Building Approvals, Australia* (cat. no. 8731.0).

In the years 2005-09, average floor area for dwelling approvals in the Perth SD was consistently larger for Single houses on their own parcel of land than for Grouped houses although, in both cases, average floor area increased over the first three years of the study period and then decreased in the final year. It is likely that smaller average floor areas in 2008-09 can be attributed to the stimulating effect of the extra boost to the First Home Owners Grant. This scheme brought about an increase in the number of first home buyers choosing to build, many of whom would have built smaller, entry-level, houses.

Based on aggregated approvals data for the 2005-2009 period, Grouped houses had an average floor area of 166 square metres, nearly 100 square metres, or 59%, less than that of Single houses (264 square metres). This smaller average floor area for Grouped houses serves to 'deflate' the overall average for Houses (as classified by the FCB). In addition, average floor area for Grouped houses was consistently smaller where there were more dwellings in the cluster. Very generally, where a cluster approval was for two dwellings, floor area for each averaged around 180 square metres. Where a cluster approval was for five dwellings, average floor area was around 150 square metres.

By way of comparison, and although poorly reported, average floor area over the four years to 2009 was 120 square metres for Flats, units and apartments, and 164 square metres for Semi-detached, row or terrace houses, and townhouses

These data tend to support the hypothesis that grouped houses with smaller floor areas are currently making some contribution to the process of urban densification in the Perth SD. However, a reliable measure of the Gross Site Area, or the number of dwellings per hectare in each approval, would be necessary to provide positive proof of this hypothesis.

Average Value

One factor that is likely to impact greatly on demand for medium density dwellings in the Perth SD, as in other Australian capital cities, is the high cost of housing. Comparing the average value of building work approved for different dwelling types gives an insight into the impact of value as a motivator behind trends in housing density. Particularly in light of recent economic conditions, the desire for lower value dwellings and better returns for investors and developers may be an important factor when deciding upon dwelling/density type.

Average values are derived from estimated value of construction work as reported on building approval documents provided to local councils. These data exclude the value of land and landscaping but include site preparation costs. These estimates are usually a reliable indicator of the completed value of Houses. However, for *Other residential buildings* they can differ significantly

from the completed value as final costs and contracts may not been established before council approval is sought and gained.

The following table shows average values for approvals across all housing types provided under the Functional Classification of Building as well as under the modified grouping.

AVERAGE VALUE(a) BY BUILDING APPROVAL TYPE, Perth Statistical Division

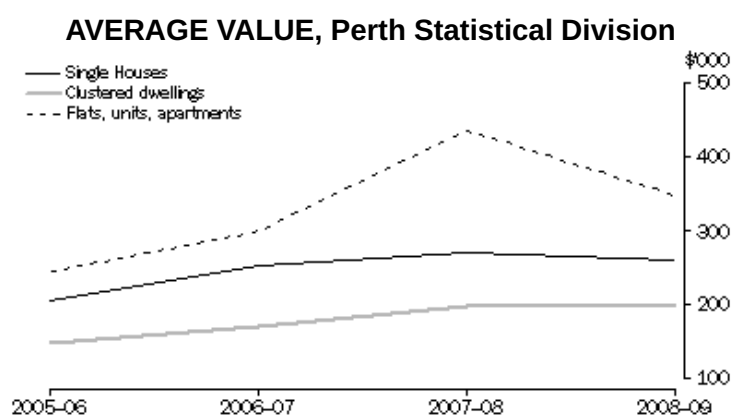
	2005-06	2006-07	2007-08	2008-09	Total
	\$'000				
Functional Classification of Buildings					
Houses	196.5	234.1	260.9	254.5	233.4
Semi-detached, etc	160.4	177.6	200.6	195.5	184.6
Flats, units, apartments	245.2	300.0	436.7	348.6	350.2
Modified grouping					
Single houses	205.7	246.1	270.3	260.2	242.8
Clustered dwellings	149.4	172.6	198.2	201.1	178.6

(a) Excludes the value of land and landscaping but includes site preparation costs.

Source: *Building Approvals, Australia* (cat. no. 8731.0).

Approvals for Single houses on a single parcel of land, perhaps not surprisingly, had a consistently higher average value than approvals for Houses classified to the FCB in the years 2005 to 2009. This is due to the lower values attaching to Grouped houses on a single parcel of land, deflating the average value of Houses. Overall, approvals for Single houses had an average value of \$243,000 whereas the average approval value of Clustered dwellings was \$179,000 (\$64,000, or 26%, less).

Within Clustered dwellings, average values were lower where cluster size was higher, although value increased across all cluster types over the four year period. For higher density flats, units and apartments, the very high average value (\$350,000) reflects the higher cost of construction for multiple storey buildings as well as the often luxurious nature and high quality design found in many new developments of this dwelling type, particularly in inner-city areas.



Source: ABS data available on request, *Building Approvals, Australia* (cat. no. 8731.0).

Over the four financial years 2005-2009, the average value of new Single houses on single parcels of land approved in the Perth SD increased by 26.5%. In this time period, average values were highest in 2007-08 before the global financial crisis impacted on the Perth housing market. For Flats, units and apartments, there was a similar peak in average values in 2007-08. However the average value of approvals for Clustered dwellings continued to rise in each of the four years.

REGIONAL ANALYSIS

The following maps display the spatial distribution of Building Approvals 2005-2009 within the Perth SD, aligned to the modified grouping for approvals. Pre-existing housing stock is not a consideration in this analysis. The distribution of Clustered dwellings, Single houses and Flats, units and apartments is shown for Statistical Local Areas (SLAs), which align very closely with Local Government Areas across the Perth SD.

Not unexpectedly, approvals for medium and high density dwellings tend to be concentrated in the older inner suburban areas of the city, while approvals for low density housing dominate in the outer metropolitan areas.

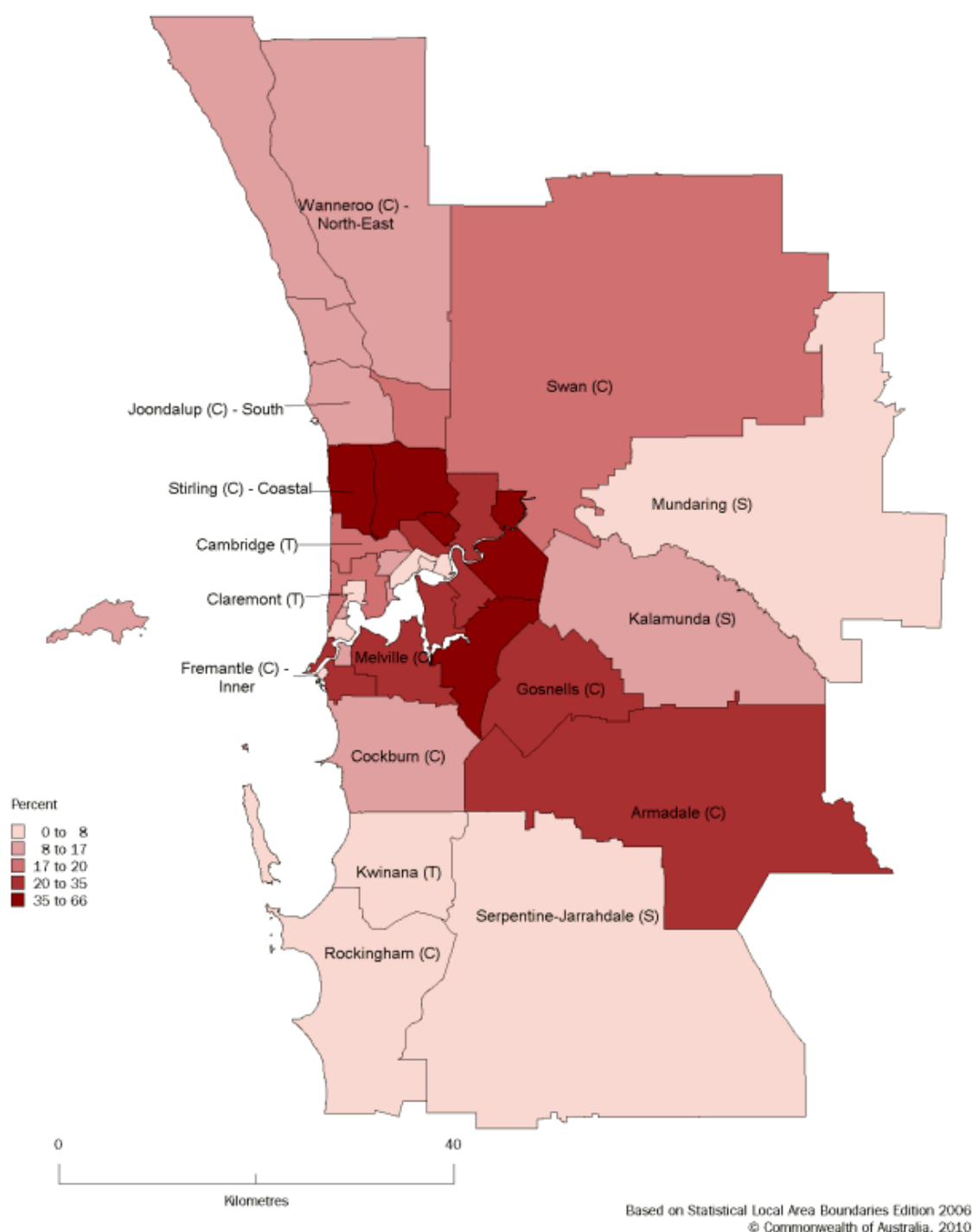
Approvals for Clustered Dwellings

Overall, more than one-fifth (21%) of residential building approvals in the Perth SD between 2005 and 2009 were for clustered dwellings. This proportion varied significantly across SLAs. Stirling - Central had both the highest proportion of approvals for Clustered dwellings (66% or two thirds of total approvals for that SLA) as well as the highest number of approvals for Clustered dwellings (3017). The next highest proportions of Clustered dwellings were in Stirling - South-Eastern (55%), Belmont (51%) and Canning (47%). Areas with low proportions of clustered dwellings included the outer metropolitan SLAs of Rockingham (7%), Mundaring (5%), Kwinana (2%) and Serpentine-Jarrahdale (1%).

In almost 40% of the 37 SLAs in the Perth SD, approvals for clustered dwellings amounted to one-fifth (20%) or more of all approvals. In six of these SLAs, the proportion of approvals for Clustered dwellings accounted for 35% or more of all approvals.

While the average value for Clustered dwelling approvals across the Perth SD, between 2005 and 2009, was only \$179,000, much higher average values for this dwelling type were recorded in some areas. Highest average values for Clustered dwelling approvals were in the inner western suburbs of Cottesloe, (\$740,000), Claremont (\$609,000) and Peppermint Grove (\$600,000). Lower average values for Clustered dwelling approvals were in Gosnells (\$134,000) and Wanneroo - North East (\$141,000). Swan and Armadale also had average values for this type of dwelling approval below \$150,000.

Approvals for Clustered dwellings as a proportion of all dwelling approvals 2005-2009



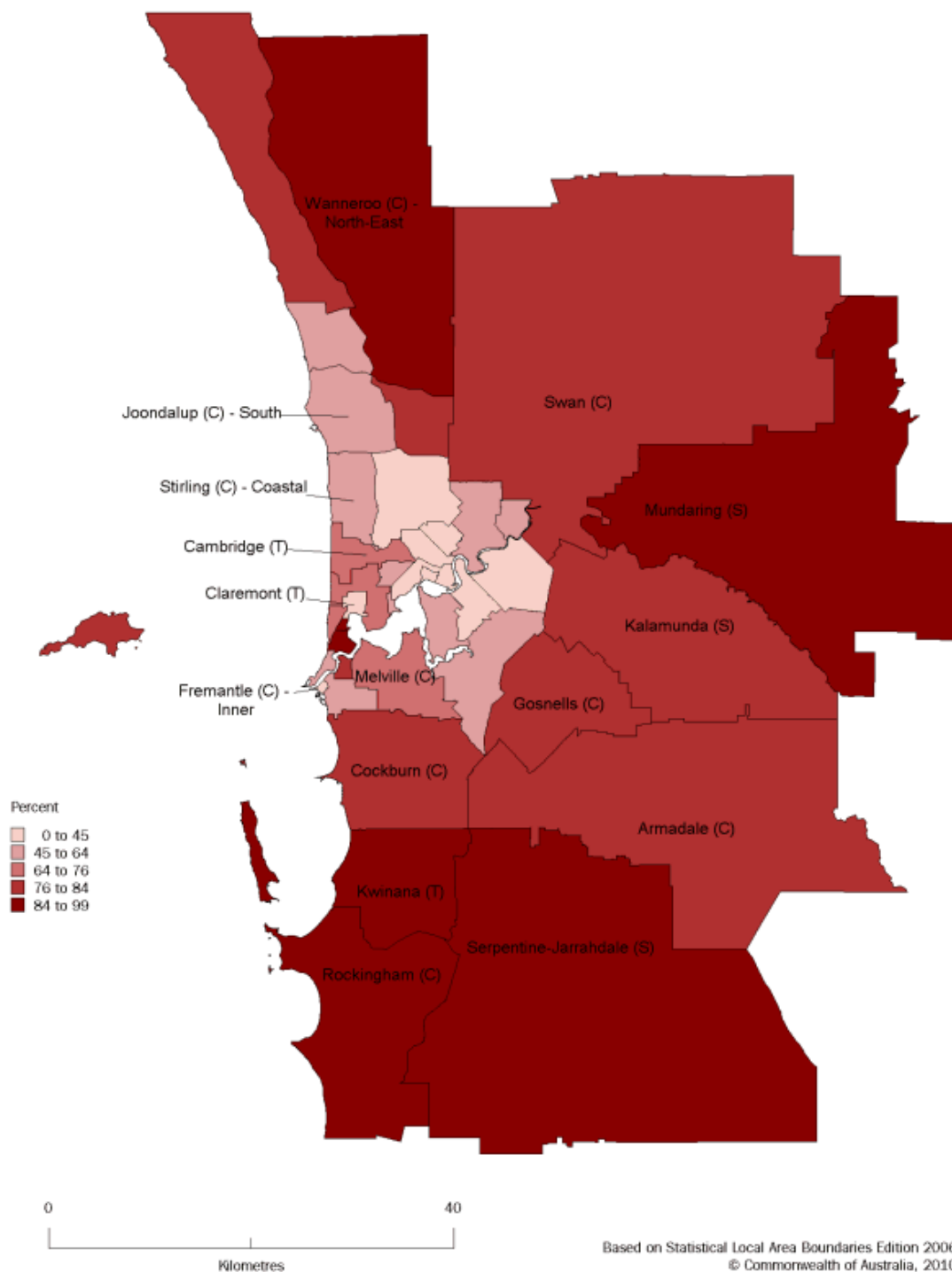
Approvals for Single Houses

Across the Perth SD, in the four years to 2009, 67% of approvals were for Single houses on their own parcel of land. Approvals for this dwelling type comprised the large majority of building approvals in some SLAs. As a corollary to findings relating to the distribution of clustered housing, the areas with the highest proportion of Single house approvals were mainly in the outer metropolitan areas, including Serpentine-Jarrahdale (99%) and Kwinana to the south; and Mundaring (95%) to the east. Over this period, the City of Rockingham had the most approvals for Single

houses, with over 5,500 approvals at an average value of around \$200,000. Many of these areas are characterised by recent land releases (mainly for single house development) and are attractive to first home-buyers and young families due to their relatively low land values.

Approvals for new Single houses had the lowest average approval value in Kwinana (\$154,000) and Gosnells (\$179,000), compared with \$243,000 across the Perth SD. At the other end of the range, the highest average approval value was for Peppermint Grove (\$1.4m), followed by other western suburbs SLAs including Mosman Park (\$921,000), Nedlands (\$831,000) and Cottesloe (\$822,000).

Approvals for Single Houses as a proportion of all dwelling approvals 2005-2009

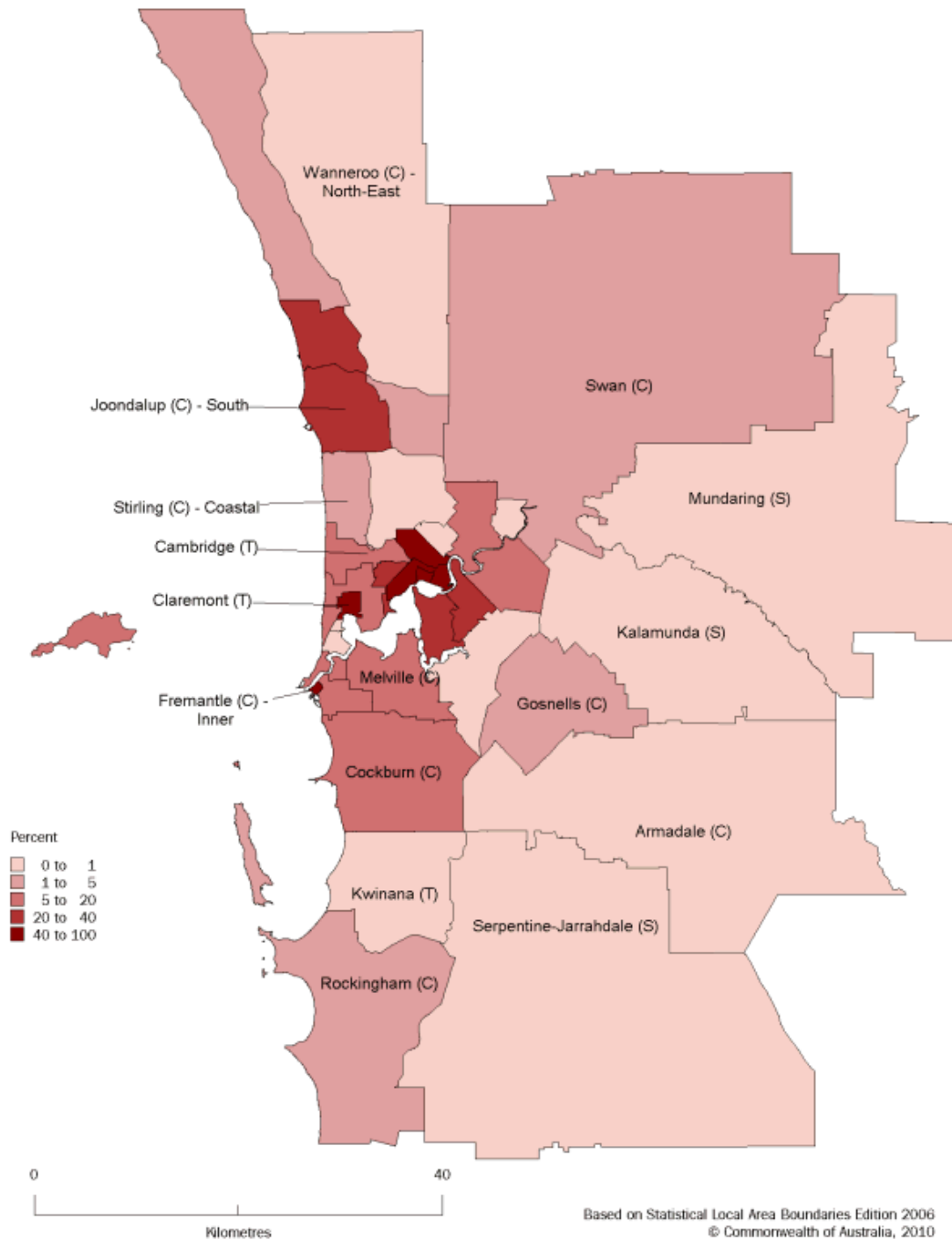


Approvals for Flats, units and apartments

While this study is primarily concerned with densification arising from medium density (Clustered dwelling) development, the use of Flats, units and apartments to create higher urban densities in the Perth SD should not be overlooked. In the four years to 2009, approvals for Flats, units or apartments accounted for 12% of total building approvals across the Perth metropolitan area. Approvals for these high density dwellings continued to be concentrated in inner-city SLAs, including Perth - Inner (100%), Perth - Remainder (99%) and Fremantle - Inner (96%). An exception was the northern coastal SLAs of Joondalup, where there has been a trend towards higher density development in recent years.

Average values for approvals for Flats, units & apartments ranged between \$125,000 in Wanneroo - North East and \$892,000 in Claremont, compared with \$350,000 for the whole Perth SD.

Approvals for Flats, units or apartments as a proportion of all dwelling approvals 2005-2009



CONCLUSION

This study sought to find a way of measuring changes in housing density in the Perth metropolitan area in recent years. In particular, the study focussed on changes in the proportions of building approvals for low and medium density dwellings.

Utilising a similar methodology to that used in 2001, this study identified minimal change in the proportions of Clustered (medium density) dwelling approvals. There has, however, been a trend towards higher density within Clustered dwelling developments, as evidenced by three-dwelling clusters becoming more prevalent than two-dwelling clusters. In addition, the proportion of approvals for Flats, units and apartments increased since the earlier study. Although medium-density housing was the primary focus of this study, future investigations would need to take into account changes over time in both high and medium density developments.

Regional analysis of the distribution of dwelling approval types across the Perth Statistical Division identified tendencies for medium and higher density housing approvals to be concentrated in older, already-developed inner city suburbs, while lower density approvals comprised a large proportion of approvals in outer suburbs. Given current government objectives for urban in-fill and densification, future analysis of approvals may identify a greater 'spread' of medium to high density approvals across the metropolitan area.

The extent to which densification goals of government are being met cannot be measured solely in terms of the relative proportions of low, medium and high density dwelling approvals. Other factors such as the size of dwellings and the size of the parcels of land on which they are located must also be considered. Anecdotal evidence suggests that the size of dwellings continues to grow while the size of the plot, particularly in some inner suburbs, is diminishing: this is also being facilitated by changes to residential zoning in some council areas.

There is a need for reliable and more detailed statistics at the LGA/SLA level, including estimates of approvals for 'granny flats' (i.e. second dwellings on plots already containing single houses) as well as data on demolitions. Another important data need is a reliable measure of Gross Site Area for each dwelling approval. This would facilitate the process of estimating the number of dwellings per hectare in any given area.

The next base, or stock measure, of housing density that the ABS will undertake is the 2011 Census of Population and Housing. Post 2011, an estimation of dwelling density increase could be achieved for the intercensal years, using building approvals by development type. This approach would provide a clearer view of trends in housing density and would enable state and local governments to monitor progress towards their goals of increased urban densification.

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ABS (various years). Building Approvals, Australia, cat. no. 8731.0.

ABS (various years). Regional Population Growth, Australia, cat. no. 3218.0.

ABS 2001. ABS Functional Classification of Buildings, 1999, cat. no. 1268.0.55.001.

ABS 2001. 'A View of Housing Density in Perth, 2001' in Western Australian Statistical Indicators, Dec 2001, cat. no. 1367.5.

ABS 2006. Basic Community Profile - Perth Statistical Division, 2006 Census Community Profile Series, cat. no. 2001.0.

Council of Australian Governments 2009. 'National objective and criteria for future strategic planning of capital cities'. Appendix B in COAG Communique, 7 December 2009.

History of Changes

HISTORY OF CHANGES

20/01/11

The following topics were updated:

Statistical Summary (Economic)

Statistical Summary (Social and Demographic)

WA Population Growth (Population)

Labour Force Status (Employment and Earnings)

Job Vacancies (Employment and Earnings)

Retail (Consumption)

Lending and Housing Finance Commitments (Investment and Finance)

Building Approvals (Construction)

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

A new feature article entitled *The Indian Ocean Frontier: Western Australia's Trade and Investment with India and the Indian Ocean Rim* is also included in this update.

22/12/10

The following topics were updated:

Statistical Summary (Economic)

Statistical Summary (Social and Demographic)

Births - new life expectancy figures added (Population)

Marriages and Divorces (Social Trends)

Labour Force Status (Employment and Earnings)

Industry of Employment (Employment and Earnings)

State Final Demand (State Accounts)

Retail (Consumption)

New Motor Vehicle Sales (Consumption)

Lending and Housing Finance Commitments (Investment and Finance)

Building Approvals (Construction)

Mining and Energy

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

02/12/10

The following topics were updated:

Statistical Summary (Economic)

Statistical Summary (Social and Demographic)

Deaths (Population)

Labour Force Status (Employment and Earnings)

Average Weekly Earnings (Employment and Earnings)

Wage Price Index (Prices)

Lending and Housing Finance Commitments (Investment and Finance)

Private New Capital Expenditure (Investment and Finance)

Short-term Visitor Arrivals on Holiday (Tourism)

Short-term Resident Departures on Holiday (Tourism)

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

A new feature article entitled *Water Choices of Perth Households* is also added in this update.

11/11/10

The following topics were updated:

Statistical Summary (Economic)

Statistical Summary (Social and Demographic)
Births (Population)
Consumer Price Index (Prices)
House Price Indexes (Prices)
Price Indexes of Materials Used in Building (Prices)
New Motor Vehicle Sales (Consumption)
International Merchandise Trade
Building Approvals (Construction)

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

21/10/10

The following topics were updated:

Statistical Summary (Economic)
Statistical Summary (Social and Demographic)
WA Population Growth (Population)
Labour Force Status (Employment and Earnings)
Job Vacancies (Employment and Earnings)
Retail (Consumption)
Lending and Housing Finance Commitments (Investment and Finance)
Construction

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

30/09/10

The following topics were updated:

Statistical Summary (Economic)
Labour Force Status (Employment and Earnings)
Industry of Employment (Employment and Earnings)
Lending Finance Commitments (Investment and Finance)
Mining and Energy

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS Data for WA* was also updated.

09/09/2010

The following topics were updated:

Statistical Summary (Economic)
Average Weekly Earnings (Employment and Earnings)
State Final Demand (State Accounts)
Wage Price Index (Prices)
New Motor Vehicle Sales (Consumption)
Private New Capital Expenditure (Investment and Finance)
Building Approvals (Construction)

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS Data for WA* was also updated.

19/08/2010

The following topics were updated:

Statistical Summary (Social and Demographic)
Statistical Summary (Economic)
Regional Population Growth (Population)
Labour Force Status (Employment and Earnings)
Consumer Price Index (Prices)

Price Indexes of Materials Used in Building (Prices)
House Price Indexes (Prices)
Retail (Consumption)
Housing Finance Commitments (Investment and Finance)
Building Approvals (Construction)
Short-term Visitor Arrivals on Holiday (Tourism)
Short-term Resident Departures on Holiday (Tourism)
International Merchandise Trade

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS Data for WA* was also updated.

29/07/2010

The following topics were updated:

Statistical Summary (Economic)
Lending Finance Commitments (Investment and Finance)
Housing Finance Commitments (Investment and Finance)
Value of Building Work Done (Construction)
Number of Dwelling Units and Stage of Production (Construction)

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

A new feature article entitled *A View of Housing Density in Perth, 2005 to 2009* will be released on 30 July 2010.

15/07/2010

The following topics were updated:

Statistical Summary (Social and Demographic)
Statistical Summary (Economic)
WA Population Growth (Population)
Education and Training (Social Trends)
Labour Force Status (Employment and Earnings)
Job Vacancies (Employment and Earnings)
New Motor Vehicle Sales (Consumption)
Building Approvals (Construction)
Engineering Construction Activity (Construction)

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

24/06/2010

The following topics were updated:

Statistical Summary (Social and Demographic)
Statistical Summary (Economic)
Crime and Justice (Social Trends)
Labour Force Status (Employment and Earnings)
Industry of Employment (Employment and Earnings)
State Final Demand (State Accounts)
Retail (Consumption)
Lending Finance Commitments (Investment and Finance)
Housing Finance Commitments (Investment and Finance)
Building Approvals (Construction)
Mining and Energy

The data cubes *Summary of Statistical Indicators (Economic)* and *Summary of Statistical Indicators (Social)* were updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

03/06/2010

The following topics were updated:

Statistical Summary (Economic)
Labour Force Status (Employment and Earnings)
Average Weekly Earnings (Employment and Earnings)
Wage Price Index (Prices)
Private New Capital Expenditure (Investment and Finance)
Lending Finance Commitments (Investment and Finance)
Housing Finance Commitments (Investment and Finance)
Short-term Visitor Arrivals on Holiday (Tourism)
Short-term Resident Departures on Holiday (Tourism)

The new topic *Household Waste Management (Environment)* was added in this supplementary issue. The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

13/05/2010

The following topics were updated:

Statistical Summary (Economic)
Consumer Price Index (Prices)
Price Indexes of Materials Used in Building (Prices)
House Price Indexes (Prices)
Sales of New Motor Vehicles (Consumption)
Building Approvals (Construction)
International Merchandise Trade

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

22/04/2010

The following topics were updated:

Statistical Summary (Economic)
Labour Force Status (Employment and Earnings)
Lending Finance Commitments (Investment and Finance)
Housing Finance Commitments (Investment and Finance)
Value of Building Work Done (Construction)
Number of Dwelling Units and Stage of Production (Construction)
Engineering Construction Activity (Construction)

The new topics of *Job Vacancies (Employment and Earnings)* and *Agricultural Water Use (Environment)* were added in this supplementary issue. The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

08/04/2010

The following topics were updated:

Statistical Summary
WA Population Growth (Population)
Regional Population Growth (Population)
Causes of Death (Population)
Retail Trade (Consumption)
Lending Finance (Investment and Finance)
Housing Finance (Investment and Finance)
Building Approvals (Construction)
Mining and Energy

The data cube *Summary of Statistical Indicators (Economic and Social)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated and

a new data cube, *Links to Other Data Sources*, was included for the first time.

24/03/2010

The following topics were updated:

Statistical Summary
Average Weekly Earnings (Employment and Earnings)
Labour Force Status (Employment and Earnings)
Industry of Employment (Employment and Earnings)
State Final Demand (State Accounts)
Private New Capital Expenditure (Investment and Finance)
Building Approvals (Construction)

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. The data cube *Links to ABS data for WA* was also updated.

10/03/2010

The following topics were updated:

Statistical Summary
New Motor Vehicle Sales (Consumption)
Wage Price Index (Prices)
Lending Finance (Investment and Finance)

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics along with a more detailed breakdown of quarterly and annual changes for the Wage Price Index by Sector. The data cube *Links to ABS data for WA* was also updated.

24/02/2010

The following topics were updated:

Statistical Summary
Labour Force Status (Employment and Earnings)
Housing Finance Commitments (Investment and Finance)
Short-term Visitor Arrivals on Holiday (Tourism)
Short-term Resident Departures on Holiday (Tourism)

The data cube *Summary of Statistical Indicators (Economic)* was updated with the most recent statistics on the above topics. This data cube was expanded to include a broader range of overseas arrivals and departures data while the data cube *Links to ABS data for WA* was also updated.

28/01/10

New topics were added, including life expectancy and fertility, with links for each topic to related WA data.

The data cube *Summary of Statistical Indicators (Social)* was expanded to include a broader range of population indicators including life expectancy, fertility, mortality, with some Indigenous data. A new data cube containing links to all related WA data previously released on the ABS website was introduced.

This was the final release of the publication on a quarterly basis. From February 2010, *Western Australian Statistical Indicators* will be updated progressively as new data become available.

Explanatory Notes

Abbreviations

EXPLANATORY NOTES

Explanatory Notes of the form found in other ABS publications are generally not included with

Western Australian Statistical Indicators. Readers are directed to the Explanatory Notes contained in related ABS publications.

ABBREVIATIONS

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ANZSCO	Australian and New Zealand Standard Classification of Occupations
Aust.	Australia
ERP	estimated resident population
n.e.s	not elsewhere specified
n.f.d	not further defined
SITC	Standard International Trade Classification
WA	Western Australia

Index of Feature Articles (Appendix) (Appendix)

APPENDIX INDEX OF FEATURE ARTICLES

DECEMBER QUARTER 2009

Adult literacy in Western Australia

First home buyers and other borrowers

SEPTEMBER QUARTER 2009

Spotlight on the Pilbara

JUNE QUARTER 2009

The ups and downs of Western Australia's labour job market

SEPTEMBER QUARTER 2008

Preparedness for emergencies and household assistance required, pp. 13-24

JUNE QUARTER 2008

Migration and mobility in Western Australia, pp. 15-34

MARCH QUARTER 2008

Regional household and family characteristics in Western Australia, pp. 14-31

Retail industry in Western Australia, pp. 32-47

DECEMBER QUARTER 2007

Regional housing in Western Australia, pp. 14-44

Short-term overseas travel to and from Western Australia, pp. 45-62

SEPTEMBER QUARTER 2007

Regional wage and salary earners in Western Australia - 2001-02 to 2003-04, pp. 14-23

Cultural diversity in Western Australia, pp. 24-35

JUNE QUARTER 2007

Research and experimental development in Western Australia, pp. 15-19

General Social Survey - Western Australian summary, pp. 20-28

Changing water and energy use in Western Australian homes, pp. 29-35

MARCH QUARTER 2007

The resources industry in Western Australia: 2001-02 to 2005-06, pp. 14-34

The agriculture industry in Western Australia, pp. 35-44

DECEMBER QUARTER 2006

Pathways in education and related outcomes in Western Australia, pp. 16-28

Drivers of Perth's rising prices, pp. 29-34

International trade in Western Australia: 2003-04 to 2005-06, pp. 35-42

SEPTEMBER QUARTER 2006

Measures of Western Australia's progress, pp. 16-31

Western Australians on the move - A housing perspective, pp. 32-36

JUNE QUARTER 2006

Labour force trends in Western Australia, pp. 14-36

Selected statistics for Aboriginal and Torres Strait Islander people in Western Australia, pp. 37-55

MARCH QUARTER 2006

Skills shortages in Western Australia - Part 2, pp. 14-45

Household expenditure in Western Australia, pp. 46-53

DECEMBER QUARTER 2005

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Data Cubes (I-Note) - Data Cubes

The Data Cubes for the Summary of Statistical Indicators (Economic), Summary of Statistical Indicators (Social) and Links to ABS Data for WA have been updated as of 20/01/2011. The topics updated are WA Population Growth; Labour Force Status; Job Vacancies; Retail; Lending and Housing Finance Commitments; and Building Approvals.

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